100 YEARS of HERD TESTING

1909 — 2009

A Farming Partnership

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Contents

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Herd Testing jars 1940s

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Author: Clare Bayly
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In 1909, talks began between a small group of dairy farmers and their dairy company, Dalefield, with the Department of Agriculture to develop a system that would measure and compare the butterfat yield of their herds. The result was the launch of self-sample herd testing in New Zealand.

***Clare Bayly**, LIC Communications Manager/Editor*

For them it was a small milestone, giving them a uniform way to measure and compare the production of their cows.

For the industry, it was the genesis for a movement which would grow in momentum and size; which history would prove to be the catalyst for world-breaking technologies and science that would deliver an industry which boasts some of the highest rates of genetic gain and voluntary participation in herd improvement in the world.

They could not have predicted the impact they would have.

Livestock Improvement (LIC) is able to trace it roots back to that small group of farmers in the Wairarapa, our archive of memorabilia and history enabling us to pay tribute to what has been achieved in the first 100 years of herd testing in New Zealand.

As much as we would like, it is simply not possible to acknowledge every individual and every milestone along the way but, on behalf of the dairy industry, LIC has produced this book as a tribute to the generations of people who have applied their energy and passion to building the herd improvement 'machine' that we all enjoy today.

This document is a tribute to those Dalefield suppliers for the tenacity and foresight they displayed; to the breeders of pedigree dairy cattle who drove the herd testing movement in the early years and the generations of farmers who adopted herd testing as one of the best ways to accelerate the quality and output of their farming businesses.

And it's a tribute to the hundreds of Herd Testers who responded to our appeal for stories.

Talking with these people (many now in their 80s) has been heart-warming and, at times, hilarious; their enthusiasm and passion for the job and the industry evident in the memories and photographs they so willingly shared. We are grateful for each and every contact and regret that they cannot all be shared in this book; many of the stories feature 'the early years' when herd testing conditions were so different from today.

I hope this book will find a place on every farming coffee table – the term 'farming' loosely applied to include everyone with a commitment and passion for dairying.

Inside you will find personal accounts – from LIC's Chairman, a fifth generation dairy farmer and self-confessed herd improvement devotee, to Glenn Whittaker whose hand, along with others, helped steer the integration of New Zealand herd improvement, the Breed Societies whose members played such a pivotal role and, of course, the people who were (and are) the face of herd testing.

Centenary celebrations have been deliberately constrained due to the economic challenges being faced by our shareholders – there will be no regional celebrations or dinners. The Centenary, and the book, will be officially launched by the Prime Minister, Hon John Key, at the National Fieldays in Hamilton on 10 June 2009.

Copies of the book will be available at Fieldays, from LIC's offices and will be mailed to all LIC shareholders and the Herd Testers who have contacted us.

Stuart Bay's grandparents
Wallace and Sybil Dron with their daughter June, Stuart's mother.

Herd Improvement and Breeding

— *in the genes*

A personal reflection from the Chairman of LIC, Stuart Bay

As a fifth generation dairy farmer in New Zealand and fourth generation in herd improvement public life, I know that destiny and genetics have played a significant part in my farming career.

My maternal great-grandfather and grandfather, Will and Wallace Dron, farmed in the Waimea Plains district of Richmond, Nelson. Of Scottish descent they owned the Jersey Studs, Totara Bank and Beacon Hill, and began with a unique herd registration code using the letter 'T' tattooed into the ear of every calf born.

Both Will and Wallace were involved in the local herd testing association, Waimea Dairy Company, pedigree and A&P Association activities. Beacon Hill bulls went into the NZ Dairy Board sire proving scheme in the 1960s.

My mother, June, married David Bay, who brought her north to the Waikato after World War II and a Massey College education. He was farm manager for Mr R. Alan Candy on his well known Somersby Jersey Stud at Ngarua for 10 years.

'RA', as he was affectionately known, was an extraordinary dairy industry leader of the times and a mentor and teacher to my father and, later, myself. He was Chairman of the Herd Recording Council which guided the development of the 1939 Herd Improvement Plan and its successors and was Chairman of the inaugural 1950 Artificial Breeding Committee of NZ Dairy Board .

"His lifelong association with herd improvement began in 1926 when he started a Ngarua herd testing group. In 1933 he became Chairman of the Auckland Herd Improvement Association, a post which he was to hold for 33 years.

Over the next 35 years he was prominent in many farming organisations. He was Director (1935–68) and Deputy Chairman (1952–57) of the NZ Co-operative Dairy Company, Chairman (1957–61) of the NZ Dairy Products Marketing Commission, Deputy Chairman (1961–65) of the NZ Dairy Production and Marketing Board, a member (1937–46) and Chairman (1944–46) of the Massey College Council (later Board of Governors).

He had an unusual ability to work with scientists, to recognise the relevance of their work, and to translate technical information into practical advice to farmers. In chairing meetings of mixed groups of scientists, farmers, politicians and industrialists, he was skilled at leading the discussions to a productive conclusion." (RD Stanley)

Reports such as the following from 'Agricultural Organisation in NZ', 1935 would have strongly influenced his thinking:

"The herd testing movement is worthy of special mention. Practically 20 per cent of the dairy cows in the Dominion are tested for butter fat production monthly during the milking season. The information thus gained is essential if a herd of high-producing animals is desired. As the result of herd testing, greater attention to culling and breeding and improved farm management, the average butterfat yield per cow increased from 154.25 lbs. per annum in 1920-21 to 218.80 lbs. per annum in 1929-30."

David Bay founded the Baylea Jersey Stud using Somersby and Glenmore bloodlines and registered his herd with the letters 'MBI', a forerunner of the participant code system used in the MINDA database today.

David went on to public life as a director with NZ Co-operative Dairy Company, NZ Dairy Board and Auckland Herd (and then Livestock) Improvement Association. He became the inaugural Chairman of the Livestock Improvement Council in 1984, retiring in 1988 after guiding LIC into being.

I was born and bred on Candy's farm, and grew up in the pedigree world of the show ring, stock sales, breeding, learning cows' names and pedigrees and records.

As a student in 1970 I worked on Mr Candy's Okoroire (Tirau) farm and, with him, on his Broadlands, Reporoa development farm.

I recall staying for a week in a Taupo motel with RA and Mrs Candy and benefiting greatly from his wisdom as farm and herd improvement were among his passions. I would have been among the last of his long line of staff to have the privilege.

I spent four years at Massey University and learnt animal breeding from Professors Don Flux and Robert Andersen, and animal production from Professor Colin Holmes.

RA, my father and my professors all profoundly influenced my thinking so I eagerly became a committeeman of Auckland LIA in 1975 to learn as much as I could and hopefully, in turn, influence my father's thinking as he sat on the Management Committee of the LIA.

It has been a privilege to have been a director for 21 years now, beginning in 1988 on my father's retirement, with the Auckland Regional Board, and for the last 20 years on the LIC Board, with eight as Deputy Chairman and now five as Chairman.

We have four generations living on our family farm at Manawaru, Te Aroha and one of the highlights has been achieving three bulls on the LIC Premier Sires team in the one year.

Our herd ranks in the top few percent for Breeding Worth which is the measure of profit performance for dairy animals from feed. We have tried to practice what we preach.

I know RA would be proud to see that we farmers are still, collectively, driving the science along with developments such as integrated information solutions from MINDA and Protrack along with DNA technology to reduce the generation interval and set genetic gain on a faster orbit, to achieve the mission he first espoused in the 1930s to improve the net incomes of New Zealand dairy farmers."

In 2002 I wrote:

"Livestock Improvement has entered an exciting new era as a New Zealand dairy farmer owned co-operative.

"It has succeeded in the past because at least four generations of farmers have believed in a united approach to herd and farm improvement using the best available science combined with outstanding foresight. They chose strong management and guided business development at the cutting edge of international achievement.

"My vision is for LIC to be acknowledged by our customers, shareholders, and other stakeholders as their essential partner providing profitable, value-added genetics and farm information solutions for pasture-based farming to, in turn, position well sought after, high quality nutritional foods in the diets of discerning consumers.

"We now have a capital structure that recognises wealth creation, risk and reward, and enables shareholder choice, acknowledging their own individual needs and aspirations at a point in time.

"Control of the company remains strongly with our farmers where it rightly should be. This was recognised in the early 1900s when the Industry Control Boards were set up so farmers didn't have to leave their destiny in the hands of others. Time has proven that principle right."

As we celebrate 100 years we recognise that the platform has been firmly set for us to grow - and to pass the torch on to future generations.

Stuart Bay, Livestock Improvement Chairman

From left to right:

Four Generations

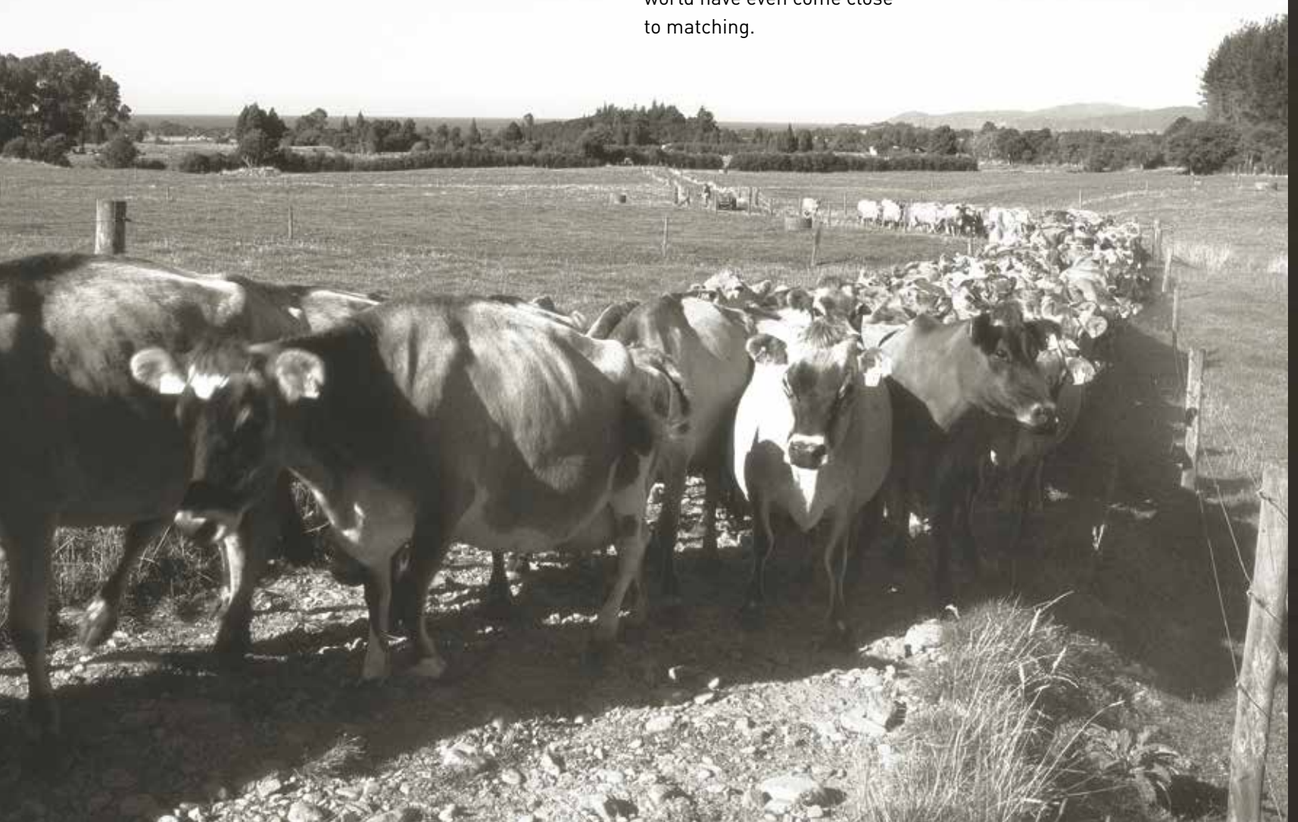
Granddaughter, Bella; Stuart Bay; Stuart's son Erin with his son Samuel; and Stuart's father, David, with great-granddaughter Eva.

A hunger for change

Glenn Whittaker was a man for the times - one of a number who saw the need for, and realised, change that established the New Zealand industry uniquely in the competitive dairying world.

He, along with industry stalwarts like Charlie Hume, Arthur Ward, Jimmy James, Jeff Stichbury, RA (Alan) Candy, Dudley Lane, Allan Frampton, Jim Thwaites and David Bay saw beyond disparate herd testing and artificial breeding organisations; saw beyond what was being done overseas, and realised new potentials which few, if any, dairy industries in the world have even come close to matching.

The realisation, integrated herd improvement, continues today to deliver some of the highest rates of genetic gain (and profit) to New Zealand dairy farmers. This is the story of that integration.



When young Glenn Whittaker joined the Bay of Plenty/East Coast Herd Improvement Association in Whakatane in 1960, it wasn't for a career – it was for a cruisier life. He had a milk run in town and worked during the day as a builder, leaving and arriving home in the dark and admits he was getting a bit weary.

"I was playing rugby with men who were Artificial Breeding (AB) Technicians and thought it would be a lifestyle option that would work in better with my milk run than building."

But he first had to overcome limitations imposed by a left arm that had been partially disabled in an industrial accident, which he couldn't straighten.

"My initial application was greeted with scepticism, but the Association was short of staff so they took me on, with reservations. However, with Max Cooper's help I persevered and completed a full year as a Technician.

"I knew nothing about herd testing, it was just the end product from my days with a milk run, so I got out with Herd Testers and learned a little of their craft."

Early days of Artificial Breeding

It was the early 1960s and AB was still in its infancy; the first commercial service had been introduced to the Waikato in 1949 and the Bay of Plenty in 1952 and uptake was limited by semen shortage.

"The shortage of semen fuelled demand; farmers had to line up to be part of an AB group. AB came with an assurance of improvement that had never been there with natural mating – research showing that 1/3 of natural mating bulls actually decreased your herd's performance, 1/3 maintained it while only 1/3 improved it!

"Within five years of its introduction, every farmer who wanted AB got it."

Semen would last 24 hours in the field, arriving in insulated 'jablo' boxes by bus from the Dairy Board's Farm Production Division farm at Newstead, for allocation and pickup by Technicians.

"Each semen pack/pouch, which had pockets for the tubes of semen, was wrapped around a plastic ice bottle that would keep the semen at the right temperature.

"Fortunately the industry had the genius of Dr Pat Shannon working on semen extenders and dilution rates and he took the technology, in my time, from a single dose, requiring 25 million sperm and needing to be inseminated into the cow within 24 hours, to the Long Last Liquid (LLL) straw, where a single dose containing 1 million sperm had a shelf life of three to four days."

Managing change

Today 'change management' is a mantra of modern business and the notion that change is new brings a smile to Glenn's face.

"Change is constant – it's how and when you respond that influences the outcomes."

In reasonably quick succession Glenn was promoted through the ranks, at different times responsible for AB and herd testing – first as Field Supervisor, and then Assistant Manager and later Manager.

This new involvement at management level provided him with a perspective of how the industry was working.

"I got to know the Chairman of the Herd Improvement Council and its members, Jeff Stichbury, Director of Herd Improvement, Dr John James, Director of Artificial Breeding, the Managers of the Herd Improvement Associations and became familiar with the challenges the industry was facing. In 1973 I was invited to participate in a five week dairy industry study group to Europe."

The insights gained from this tour were fundamental to the subsequent amalgamation of the six Herd Improvement Associations into a Federation.

"Promoting the advantages of combining the six associations into a single legal and operational entity had as many opponents as supporters.

"Many in the associations protected their independence and resisted any loss of autonomy. However, some of their concerns were valid and the only way to address them was to first understand them and then talk through the benefits which everyone would enjoy if they were united."

This inclusive approach saw Glenn, along with Jim Thwaites and Dudley Lane, visit each Livestock Improvement Association and talk with their respective Boards and Management to encourage amalgamation.

It was, however, a bridge too far, with parochial interests high on many agendas. The proposal was finally watered down with a majority agreement to form a Federation to represent the Associations on a range of restricted issues.

Finally, amalgamation

Finally, in 1976, five Associations merged and then, after more discussion and collaboration, the sixth (Wellington/Hawke's Bay) agreed to amalgamate into the NZ Federation of Livestock Improvement Associations (LIAs).

Glenn was appointed Manager of the Federation, charged with convening meetings of Association Chairmen and Managers and responsible for representing the latter group on the Herd Improvement Council, collaborating with the Dairy Board's Farm Production Division, breed societies and Government departments.

"While the operation of the Federation was a big improvement I could see that further amalgamation would deliver significant value to our farmers; for example, each LIA had its own accounts system, infrastructure and a lot of other duplication. There were huge inefficiencies with both operations and decision making."

Study tour to North America

While total integration was too radical for the times, Glenn set about widening the perspective of each LIA, the Farm Production Division and the Herd Improvement Council through a study tour to the United States and Canada.

"They all leapt at the chance to have an indepth look at what was working and what wasn't in herd improvement organisations in North America, putting up 24 tour participants who covered the roles of governance, management and operations.

"There followed a frantic three-week tour that took us to herd test laboratories and AB companies, dairy farms and University Animal Science Departments in California, Wisconsin, Pennsylvania, New York State and Quebec.

"My role in the process was to create an environment in which tour participants could appreciate the wider benefits of amalgamation and continue to facilitate dialogue until the right conclusions were reached.

"The resulting trip report, which recommended that the Dairy Board establish an industry committee to examine dairy herd improvement and farm management in New Zealand, was accepted by the Dairy Board and resulted in Dr Alan Frampton being appointed to lead a structural review.

"And the rest is history."

Frampton Review

"The Frampton Review's recommendation that the six LIAs and the Farm Production Division be integrated into a single organisation was adopted and the new entity commenced operations on 2 August 1984 as the Livestock Improvement Division (LID) of the Dairy Board.

"The manner in which the integration took place was interesting.

"A Declaration of Intent saw each of the six LIAs and the Dairy Board's Farm Production Division retain their respective legal entities and ownership of assets, but they were required to make their assets and resources (including staff) available to the LID to be deployed and managed as though they were owned by the LID.

"This changed in 1988 when each of the LIAs was wound up as legal entities and their respective assets vested with the Dairy Board.

"The Board renamed a shelf company it owned the Livestock Improvement Corporation (LIC) and transferred the LIA's assets, including those of the Farm Production Division, to the new company. The LIC then issued shares equal to the value of the assets – $61.4 million – back to the Dairy Board. The assets of the LIAs and the Farm Production Division had been paid for by the users of the services via a levy on the semen sold, so the shares issued to the Dairy Board were to be held in trust on behalf of current and future users."

Glenn become the first General Manager of the LID in 1984, and oversaw the establishment of such things as the Core Database and MINDA herd recording.

"The value proposition was as clear then as it is now, resulting in the only horizontally integrated herd improvement organisation in the world – AB, herd testing, Database and farm management – vertically integrated into the New Zealand dairy industry and delivering unparalleled levels of value to farmers and the industry."

Change is constant

it's **how & when** you respond that influences the ***outcomes.***

Legacy of herd improvement

Glenn laughs when he thinks back to the forerunner of LIC's database which today contains billions of records.

"The biggest legacy of herd improvement over 100 years and the integration of the organisations involved is the fact that the New Zealand dairy industry gathered and stored information along the way. The breed associations played a very important role in those early years.

"In the early days this was manual. We'd have a room full of women (around 25 or 30) all inputting data with manual accounting machines. You wouldn't believe the racket!

"The database we have today is a beneficiary of that work – 25 million animals with a billion records attached, the first cow record dating back to 1908."

Storage of information was one thing, making it useful to farmers another. And that's where LIC's herd improvement package, MINDA, came in.

Introduced in 1985, MINDA is the hub of information from, and back to, the farm – turning basic information from herd testing into a sophisticated range of management tools that generate profit onfarm.

"The idea for a centralised data centre came from our study tour to the States.

"When we were in Pennsylvania we visited an AB company and went into their AB area. There was this big round table with six women sitting around a large central pillar which had racks of cards on it. Each card had a different farmer's name on it.

"Farmers would ring in from around the State, place their AB orders and the women would get the appropriate card down, enter the details and assemble a list for the technicians.

"The suggestion that we could do this here on a grander scale, not just for AB but as a service centre for farmers with any issues around their herd records, was initially greeted with scepticism that it'd cost a fortune and wouldn't be workable. But it was developed and it has delivered beyond expectations. MINDA is as fundamental on today's dairy farms, as the cowshed.

"The progress made over 100 years of herd improvement in this country out-performs any other major dairy industry in the world.

"The LIC structure, its services and achievements are the envy of every other major dairying nation.

"There is no doubt that the horizontal integration put in place in 1984 enabled progress to accelerate due to critical mass, reputation as a professional operation, enhanced use of technology, the launch of the Database, liaison with other dairy industry research organisations and a clearer focus of the common goal by both staff and directors.

"I was fortunate in having some great industry leaders to mould, encourage and work with me during my time. Chairmen like Jim Steele, Dudley Lane, David Bay, Jim Thwaites, Peter Dye and Fraser McKenzie and Dairy Board CEO, Bernie Knowles, provided great inspiration and were a source of guidance. Above all the cooperative New Zealand dairy industry provided a stimulating environment.

"I still believe the New Zealand dairy farmer/family is unique. Their ability to manage the huge responsibilities and workloads, essentially 24/7, in operating their enterprises was always an inspiration to me, and still is."

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Reflections on the assisted immigrant scheme

"One of the things that fascinated me when I joined the Bay of Plenty/East Coast Herd Improvement Association in 1960 was the Government assistance package to attract Herd Testers from the United Kingdom.

"The job wasn't the most attractive – 26 days continuous work each month, staying at a different farm each night, with only a few days off at the end before you started again – a pattern which continued until cows were dried off in May or June each year. We could not recruit enough Kiwis to do the job so we had to look further afield.

"The Government scheme brought English people out at no cost but they were bonded for two years.

"Gauging numbers was always a challenge. We'd talk to existing Herd Testers to see how many were staying on and then 'guess' how many we'd need the following year. In any year, the six Herd Improvement Associations could ask for 20 or 30 'Poms'.

"Interviews took place at New Zealand House in London and we'd get a note saying xx number of immigrants would be arriving in (in our case) Whakatane on the xx bus at xx pm.

"So we'd go to the bus station in Whakatane and off the bus would come our new recruits, men usually dressed formally in suits, women well presented, all with their suitcases containing their worldly possessions and, after checking they were the right people, we'd take them to their boarding house and the next day they'd be into their two-week training.

"At the end of two weeks you'd send them off armed with their herd test gear, a list of the herds they'd be testing and a map showing how to find them. Sometimes they'd 'take off' with a horse and cart, other times a small vehicle. But it was a voyage of faith into the unknown in terms of the territory, the terrain, the roads, the culture and, in some cases, the industry."

Plucky people

"They'd work 26 days continuously for a month staying on a different farm every night and when they got to the morning of the 27th day they'd get a few days off. No accommodation was organised for these 'days off', the expectation being that they had already found a friendly farmer or two who'd look after them.

"The fact was that they did stay on in the industry – I can't remember any of the immigrants I got to know wanting to opt out of the job; they were a dogged lot and just got on with it, many marrying or working into farm ownership and becoming significant contributors to the New Zealand dairy industry and the country.

"Today people would never go off into the 'wide blue yonder' as they did then. In the majority of cases their faith in mankind was rewarded doubly, but there were instances when female Herd Testers were harassed and I can recall one arriving at a farm to find her bedroom was a shed with hay-bales for a bed and chooks as companions.

"The actual practice of testing the milk was done on farm at monthly intervals in those days. All pedigree farmers herd tested – they had to for their herds to be included in the Herd Book and a number of 'grade' farmers also tested for the same reason farmers do today – so they knew the profitable from the non-profitable cows.

"The basic tools of the trade were a two or three gallon crock pot of sulphuric acid and a supply of amyl alcohol (which was the mixture used in the butyrometers to separate the butterfat from the milk).

"They would take milk samples at night and then again in the morning, mixing the two together to make a proportionate sample and then put this into the butyrometer with the acid and alcohol to separate the fat from the milk. There would inevitably be burns to skin and clothing from the acid.

"The testers worked with racks which did 24 or 36 samples per spin – so if you had a 150-cow herd, you would do six spins, doing the readings as you finished each one and writing them into the test day sheet book.

"And you wouldn't be by yourself. Frequently (if working on a pedigree farm) you would have the farmer sitting behind you, scrutinising and questioning every entry, sometimes trying to talk the test up.

"Then they would have to clean all the equipment – buckets and fragile glassware, pack it all up, load the cart and get off to the next farm in time for the afternoon milking.

"It was an arduous, sometimes lonely, job and one which wasn't well paid – they got so many pence per cow. But they did a great job and I take my hat off to them."

Leadership of herd improvement

LIC's Company Secretary (1988-2009), Selwyn Tisch, pays tribute to the governance which guided the formation of one of the most integrated herd improvement movements in the world.

Herd testing is just one contributor to the driving force behind the profitability of New Zealand dairy farming – herd improvement. It's a combination of a number of facets – herd testing, herd recording, farm extension and artificial breeding.

Other dairying nations in the world have structures which seem similar – but New Zealand's is unique; the key difference being that New Zealand's herd improvement was integrated within one organisational structure - albeit until 1988 under separate legal entities.

The Dalefield Association formed in 1909 was the first of a number of parochial organisations which were formed, most centred on the local dairy factory – over time amalgamating as those factories merged.

The recommendations arising from the 1934 Royal Commission into Dairying were implemented and under the Herd Improvement Plan 1939 the, then, 28 herd testing co-operatives or associations merged into six separate Herd Improvement Associations.

The strategy and policy of dairy herd improvement was initially driven by the Herd Improvement Council formed by the Dairy Board in 1936. The Council's main objective was to improve the standard of the dairy industry in New Zealand

- *"by systematic and frequent recording of production,*
- *by marking and registering of selective calves,*
- *by the elimination of unpayable cows,*
- *by the eradication of scrub bulls,*
- *by the encouragement of the use of pedigree bulls bred on the best productive record, and*
- *by any other means which may be deemed necessary or expedient."*

While these objectives were expressed in many ways over ensuing years, the fundamental goals remain unchanged and still in place today within LIC. It's all about farmer profitability.

The introduction of commercial artificial breeding in the 1950s lead to the establishment of the NZ Dairy Board AB Committee with the six Herd Improvement Associations renamed Livestock Improvement Associations (LIAs) .

On the recommendations of the Frampton Committee the various governing bodies were formed into the NZ Dairy Board Livestock Improvement Council with the six LIAs and the Dairy Board signing the Deed of Establishment. This lead to the formation of the single entity Livestock Improvement Corporation Limited (LIC) in 1988.

Under the Dairy Industry Restructuring Act 2001 direct ownership was returned to the farmer users when LIC became a farmer owned co-operative.

While the Consulting Officer Service is now part of DairyNZ and herd testing is contestable, the legacy of the dairy herd improvement largely resides within LIC.

Throughout its history there are two key factors that underlie the success of dairy herd improvement in New Zealand –

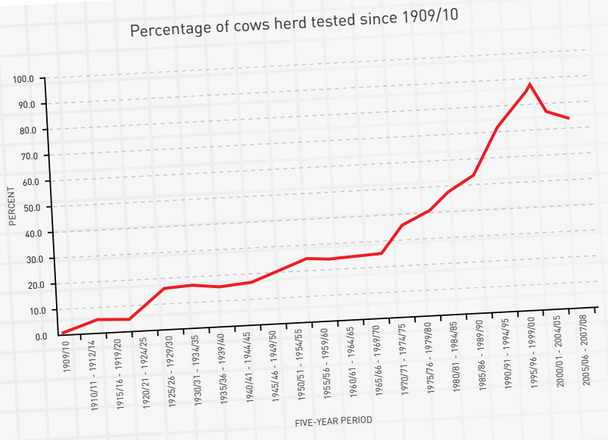
Firstly, dairy farmers' willingness to improve their record keeping and support the industry's use of that data for both their individual benefit and the collective good of fellow farmers.

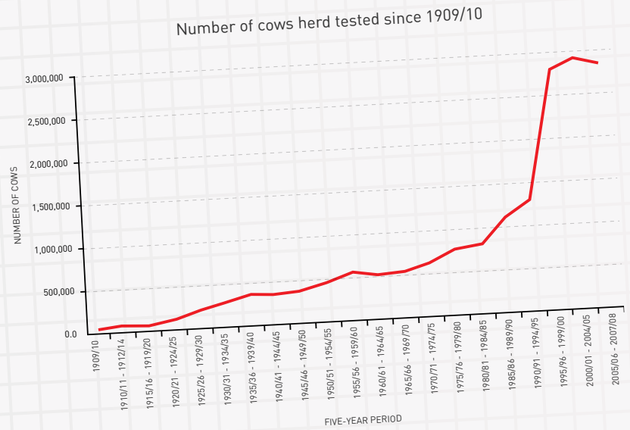
Secondly, the passion, vision and drive of individuals and the governing bodies they represented. The fact the movement was farmer lead and governed throughout its history is undoubtedly the keystone of its success.

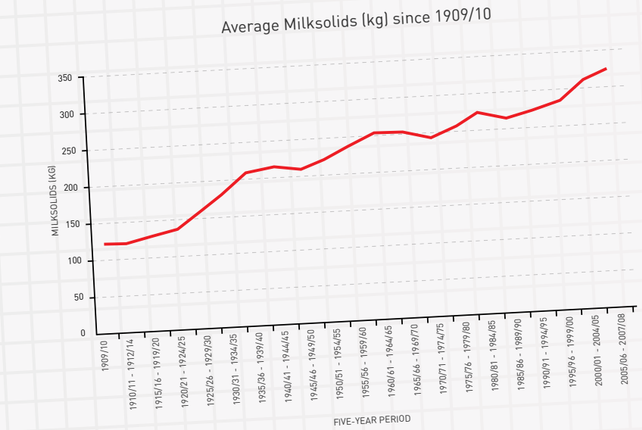
Little did those initial farmers at Dalefield realise but their tentative start with herd testing in 1909 escalated into one of the key factors driving on-farm productivity – helping take a fledging dairy industry into New Zealand's single largest export earner.

Those 815 herd tested cows in 1909 produced on average 110 kg milk solids – today's average cow produces 330 kg milk solids- a three-fold increase. In addition, today's stocking rate of 2.83 cows per hectare is estimated to be at least two to three times higher than the 1909 stocking rate.

No data is available to calculate the milk solids produced per hectare at that time, however the following graphs illustrate the percentage and number of cows under herd test and the increase in average milk solids produced over the century.







Numerous people have been involved in the herd improvement movement since its inception and this book cannot recognise them all or do justice to their contributions. However from a leadership perspective certain individuals must be mentioned:

Chairmen of the Herd Improvement Council/LIC – R Alan Candy, Dudley Lane, Jim Thwaites, David Bay, Peter Dye, Fraser McKenzie, David Milne and currently Stuart Bay.

Management of the various organisations - Charlie Hume, Arthur Ward, Jimmy James, Jeff Stichbury, Glenn Whittaker and Stuart Gordon.

In addition, the success of the movement would not have been possible without the support of generations of Chairmen, Directors and Management of the NZ Dairy Board.

One of the early pioneers of herd testing and herd improvement was Charles (Charlie) Hume who was Manager of the NZ Co-operative Herd Testing Association (ultimately the LIA Auckland) from 1925 - 1929 and later based at the NZ Dairy Board in Wellington as the Organiser and Director of the Dominion Herd Test Federation from 1935.

Another major contributor from the NZ Co-operative Herd Testing Association was Arthur Ward who transferred to Wellington in 1936 to continue his work on Sire Surveys, the development of the Progeny Testing Scheme and to expand the use of the Field Surveys used to establish the fates of animals and farming practices. These data sources helped supplement the production data generated by herd testing, and together paved the way for a system of herd recording which farmers have ultilised for both on farm and industry decision making and research.

Arthur Ward received the OBE in 1960 for his services to dairy herd improvement and was knighted in 1979.

Jeff Stichbury, initially a Consulting Officer, became the Controller of Herd Improvement on the retirement of Arthur Ward in 1956.

Dr John (Jimmy) James was the Director of AB until he retired when the role was added to Jeff Stichbury's responsibilities for herd improvement. Jeff Stichbury continued in this role until 1984 when the Farm Production Division was formed and Glenn Whittaker appointed its first General Manager.

Throughout this time these people worked closely with the managers and staff of the six LIAs to deliver the products and services to New Zealand dairy farmers. There were many passionate people involved in these organisations including Selwyn Sheaf who was active in the LIA Auckland promoting artificial breeding and Cliff Broad in Taranaki laid the foundation for animal identification.

Initially milk sample analysis were performed on farm and Jack Burton (LIA Auckland) and Ian Hook (LIA Wellington Hawke's Bay) were national pioneers introducing milkoscan equipment allowing centralised milk analysis within their respective regions. The Auckland facility later became the National Milk Analysis Centre (now TestLink) testing the samples from throughout the country. Both Jack and Ian transferred to roles within the Farm Production Division and made everlasting contributions - among these Jack streamlined herd records data input, including creating the Animal Register, and Ian branded MINDA.

R.A. (Alan) Candy is recognised in the current Chairmen's perspective and he, along with Dudley Lane, chaired the Herd Improvement Council for over 40 years during a period of immense growth and benefit to New Zealand dairy farmers.

Throughout the 100 years of herd testing and herd improvement, many dairy farmers served on the various committees, boards, councils, liaison farmer groups etc. What they had in common was a commitment to the objective set in 1936 and the success of their efforts cannot be better expressed than in the increase in the milk solids production of New Zealand dairy cows. There can be no better legacy to their vision, passion and contribution, than this level of production.

The AB Committee 1958

Top Left: Dr Patrick Shannon DSC, Jeff Stitchbury, Dudley Lane, Selwyn Sheaf, A.W.Montgomerie, S.A. Southcombe
Bottom Left: Dr John James, Sir Arthur Ward, R.A.Candy, A.S.Wylie, I.B.Gour

THE ROLE OF PEDIGREE BREEDERS

No tribute to the first 100 years of herd testing can be complete without recognising the significant impact that pedigree cattle breeders made to the early, and ongoing, adoption of herd testing and recording in New Zealand.

Their desire for a yardstick between cow and herd performance drove genetic improvement in the national herd – something which every dairy farmer today enjoys, regardless of whether they are farming pedigree or grade cows.

LIC is proud to acknowledge the history of the foundation breed societies in New Zealand and provide this forum so they can pay tribute to the work of their members.

Jersey New Zealand

New Zealand Jersey Cattle Breeders Association Inc

The NZ Jersey Cattle Breeders Association was established in 1902 by a group of like-minded Jersey breeders whose passion for the Jersey cow set a strong foundation for generations to come.

The Association published its first Advanced Register of Merit in 1924. This publication incorporated milk and butterfat records of yearly tests and was authenticated by the NZ Department of Agriculture.

In the 1958-59 testing season the Association published the first issue of the Production and Merit cow register incorporating the first new class record holder for four year olds. Mount Cosy Royal Flossie HC recorded 753 lb of fat, 10,890 lb milk at 303 days. Flossie was bred and tested by Mangal Singh of Otorohanga.

Jersey New Zealand maintains and produces the Production, Merit and Classification Register to this day and uses the information to identify top producers within the breed. The information is also used in the calculations of the annual Production Awards. For the 2007/08 season the winner of the top cow award was Grantham Panache Nina VG4, 8,734 litres milk, 487 kg fat and 371 kg protein, earning $6,596.13.

Congratulations to Jersey breeders and farmers country-wide on their achievements over the last 100 years – we celebrate with you.

Ayrshire New Zealand

Ayrshire New Zealand will celebrate its centenary in the same year as herd testing. While the first Ayrshire arrived in New Zealand in 1848, it was not until 1909 that the Association was formed with the first Ayrshire Herd Book printed in 1910 and the first Ayrshire Bulletin in 1937.

The Ayrshire Herd Book records all lifetime production records and top production for each season.

The Ayrshire Production Register began in the 1972-73 season and has now completed 35 seasons recording the production of every registered Ayrshire cow in New Zealand. The Ayrshire Herd Book records all lifetime production records and top production for each season.

The Association's Jubilee year in 1983/84 registered a record 265 cows for the breed producing 272 kg or more of milk fat. That same year, adding to Jubilee year achievements, new lifetime milk and fat production yields were set by Lakeside High Star Exc, with 207,915 lb milk and 9967 lb fat, figures she was to add to in 1984/85.

In that season a record number of five Ayrshire cows produced over 454 kg fat (1,000 lb).

In the 1985/86 season the cow, Holyrood Marjorie, almost equalled her record breaking yield by returning 637 kg fat at nine years. Since 1968-69 28 records over 1,000 lb fat have been produced by Ayrshire cows in New Zealand.

In the 1987-88 season Holyrood Marjorie created Breed and All Breeds milk and fat records for all time with 15,623 litres and 791 kg fat in 305 days at 11 years.

A record number of pedigree Ayrshire cows of just under 20,000 were herd tested in the 1994/95 season.

The 1996/97 season saw two older cows exceed 500 kg fat at 10 and 15 years of age. Craigmyle Debbie, Ex3, set new veteran class figures for milk 9791 litres; 591 kg fat and 348 kg protein at 15 years, which still stands today. In the 1999/2000 season Debbie's daughter, Luckville Mar Debe ET, began her winning production streak as a three year old winning the top cow awards for Protein and Milk, taking a strangle hold on both classes for eight years until 2006/07.

The Sanrosa Ayrshire herd of current Association President Gordon Glentworth and his wife, Shona, has won the Mayfield Trophy for the top herd in New Zealand 15 times since the 1986/87 season, peaking at 584 kg milksolids in the 2005/06 season.

At the end of the 2007/08 season the Association was able to boast 47 cows with a total of 74 records of 454 kg fat or more (1,000 lb) since 1968/69.

Ayrshire New Zealand joins with farmers everywhere in the celebration of 100 years of herd testing.

New Zealand Holstein Friesian Association

The NZ Holstein Friesian Association was formed in 1910 with a membership of 129. The Association adopted the practice of the semi official testing as administered by the NZ Government Department of Agriculture in 1912 and monthly results for milk and butterfat were published in The Farmer magazine from 1913.

Production records were recorded in a number of national publications until the Association's first Performance Register was published in 1959 with information gathered from official returns from the regional Herd Improvement Associations. The first Performance Register identified the top producing cows by age group and listed the cows milked for over 100 days that exceeded 500 lb butterfat for the 1951/52 to 1956/57 seasons.

Successive Performance Registers continued in the same vein until the 1972 Performance Register when all registered Holstein Friesian cows with Group Herd Test records were recorded, if they had milked for over 100 days.

In the early 1980s, the Performance Register recorded all registered cows that herd tested. The Register noted a change in herd testing where breeders could test their herd either monthly or on alternate months. The register showed which herds were testing under what system with the clear majority of all cows being tested monthly. By this stage top production cows were identified as animals that produced over 360 kg fat each season.

By the mid-1980s the Performance Register recorded all cows tested under the Officer Sampled System and recorded whether they were tested within the four, six or eight week frequency. Time and technology had seen much improvement with the top producers exceeding 380 kg fat.

The Performance Register for 1990/91 season introduced protein as part of the test and immediately top protein production cows were identified as well as top fat producers. The Performance Register is still published annually and still identifies the top fat and protein production cows.

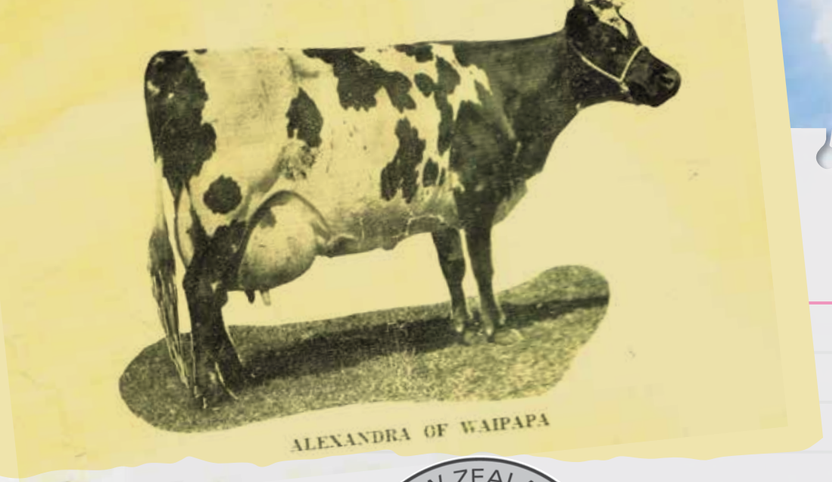
The NZ Holstein Friesian Association has used the results of herd testing to identify top performers within New Zealand and used them to benchmark for future improvement in the breed.

In the 1951/52 season top cow, Lauderdale Regina Primrose recorded 22,230 lbs (10,080 litres) of milk with a fat test of 3.6, 811 lbs in 297 days.

For the 2007/08 season Triann Damian Reanna produced 11,529 litres of milk (509 kg fat and 423 kg protein), making her the most profitable cow for the season earning $7,285.53.

A number of awards are presented each year by the Association to identify the top production cows and herds within the population of registered Holstein Friesian cattle.

Congratulations to all dairy farmers and breeders on 100 years of recording, identifying and breeding profitable registered Holstein Friesian cows.



New Zealand Milking Shorthorn Association

Milking Shorthorns are thought to be the oldest cattle breed in New Zealand, arriving with Samuel Marsden in 1814 (Bateman's New Zealand Encyclopaedia, p.466) from Australia. Their purpose was to provide milk and meat as well as transport (through bullock teams) for the early pioneers.

Originating in England and known as the Durham in many parts of the world, these red, white and roan animals were a familiar sight in the countryside. In fact, in 1900 Shorthorns made up 90% of all beef and dairy cattle in New Zealand.

While the earliest records for Shorthorns can be traced back to 1848 with Duchess an import of Mr Greenwood, and early records showing that seven bulls were imported to New Zealand in 1905 and a further three in 1907, the New Zealand Milking Shorthorn Association was not officially founded until June 1913 in Palmerston North.

Despite the Shorthorn Association being formed later than the Ayrshires, Friesians and Jerseys. Shorthorns have been influential throughout the world on modern cattle farming with Shorthorn bloodlines being used to establish distinctive breeds such as the Charolais, Murray Grey, Chianina and Luing.

The modern day Milking Shorthorn is very different from its predecessors and may now include other red breeds to increase the production and efficiency of the Milking Shorthorn.

Association awards are given out at the annual meeting and Conference; these are highly contested and celebrate the achievements of breeders and animals. The Association produces an annual herd book for members which contains production records for the year and a number of production certificates are awarded each year to Excellent and VHC cows producing between 500 and 630 kg solids. Elite Merit Awards are given to cows producing over 630 kgs milk solids.

Milking Shorthorns are shown throughout the country at various shows and were present at the inaugural dairy event held in Mansfield in January 2009.

The Association thanks farmers throughout the country for their support over the past years.

Guernsey Cattle Association

The first Guernsey cattle landed in Dunedin in July 1860 but the continued breeding of these animals was not maintained and the purity was lost.

In the 1920s another importation into New Zealand landed but no breed society was formed. Again the breed was crossed-out and the purity was lost.

In the 1940s a training farm at Ruakura milked Guernsey Cows.

In the early 1950s a group of enthusiasts from Christchurch imported cattle from Tasmania. They formed a Guernsey Cattle Association.

Today fully pedigree Guernseys are more common and New Zealand Sires are becoming a regular feature as they are more available from a range of breeders. An indication of the breed's production is given by Verwood Guernsey Stud whose cows average between 330 kg and 350 kg milksolids per annum.

Guernsey Cattle still feature at shows and have had a presence at the inaugural Dairy Event Mansfield, Feilding this year.

Historical Perspective

100 years of herd testing in New Zealand

The testing of milk from dairy cows was practiced by some New Zealand farmers at the start of the 20th century when they tested their herds for butterfat. This was followed by investigations into herd recording methods at the Wareroa State farm as early as 1902. However, attempts to establish herd testing on a systematic basis was the direct outcome of a visit paid to Denmark in 1908 by the then Director of the Dairy Division, David Cuddy. He was so impressed by the development and implementation of herd testing work that he strongly advocated its inception in New Zealand.

1900 <

Photo: Alexander Turnbull Library

A school inspector milking a cow in front of the Smith homestead. Mabel Smith is at the right. The Smith family's first home is on the left with the dairy behind it. Circa 1800s.

No account of herd testing or herd improvement beyond 1909 is complete without paying tribute to some of the first milestones of an industry which would go on to become a world leader.

The following are extracts from 'The Dairy Industry in Brief' by the NZ Dairy Board

1777 Captain James Cook brings cattle to New Zealand on the last of his three historic voyages, lands and feeds them at Ship Cove, Queen Charlotte Sound. The cattle are later released in Tahiti and Tonga.

1814 Rev Samuel Marsden, the first missionary to set foot on New Zealand soil, brings a bull and two cows from Parramatta in Australia and releases them at Russell in the Bay of Islands. Over the next nine years Marsden sends 50 or more cattle to improve the standard of living of New Zealand missionaries.

1833 John Bell arrives from Sydney, establishing himself on Mana Island off the Wellington coast with some cattle and sheep. He supplies milk, meat, cheese and butter to local whalers.

1839 The first cattle in the South Island are landed at Akaroa, Banks Peninsula.

Photo: Alexander Turnbull Library

Photo: Alexander Turnbull Library

Left: Milking cows for town milk supply in Temuka. Circa 1890.

Right: A group of dairy cows fenced inside an enclosure which two men lean against. The land in the background has been cleared of trees, probably in the Stratford region. Circa 1890.

Photo: Northwood Collection, Alexander Turnbull Library

Photo: James McAllister Collection, Alexander Turnbull Library

Left: Transporting milk cans on horse-drawn carts, possibly somewhere in Northland. Circa 1910.

Right: The scene outside a Ngarere dairy factory. Circa 1900.

1840 -1842 Small numbers of cattle arrive at Wellington, Nelson and Taranaki from Sydney.

1847 Export butter trade begins with first shipment from Banks Peninsula to Sydney.

1848 First Ayrshire and pedigree Shorthorn cattle arrive in the South Island.

1862 Three pedigree Jerseys, the first in New Zealand, are landed at Wanganui. A bull 'Old Marquis', a cow named 'Lucy' and their heifer offspring 'Jenny'. Jenny is sold to Mr W Hulke of Taranaki for £40.0.0 and is led on foot from Marton (Rangitikei) to Bell Block (Taranaki) 130 miles away.

1862 -1865 Total value of dairy exports is £3000.0.0.

1867 First officially recorded export of butter and cheese to the United Kingdom.

1871 First co-operative dairy factory (cheese) is established on Otago Peninsula.

1882 Refrigeration systems are introduced to ships trading between New Zealand and the United Kingdom.

First dairy factory co-operative in the North Island is opened at Greytown.

1884 First Friesian bull (and seven cows) imported from Holland by John Grigg of Longbeach in the South Island.

1886 First butter factory is opened in the Waikato with produce sold under the brand 'Anchor'.

1890 The Babcock method of testing milk and cream for milkfat content is perfected.

1892 First Herd Testers reach New Zealand.

Dairy Industry Act is enacted to regulate grading and purity of butter, cheese and dairy production (with subsequent Amendments in 1894 and 1898).

1894 New Zealand has 124 dairy factories, 48 of them co-operative. 569,900 cows are milked for factory supply.

1902 Popularity of mechanical milking grows.

1777 1782 1787 1792 1797 1802 1807 1812 1817 1822 1827 1832 1837 1842 1847 1852 1857 1862 1867 1872 1877 1882 1887 1892 1897 1902

Photo: Alexander Turnbull Library, Wellington, N.Z.

Photo: Making New Zealand Collection, Alexander Turnbull Library, Wellington, N.Z.

1901-1929

The organised improvement of New Zealand's dairy farm production began in 1909 when the Department of Agriculture, in conjunction with the suppliers of the Dalefield Dairy Company (Wairarapa), tested 815 cows for butterfat yield under a self-sample herd testing system.

The system was known as the 'Association' system and grew in popularity with 45,564 cows herd tested in 1921/22.

The 1920s was a time of change on dairy farms, the size of herds began to grow and the 'Releasor' type of milking machine became more common which made it difficult to obtain herd test samples from individual cows and lead to a call for more assistance in the shed.

Group Herd testing

Group Herd testing (where a Testing Officer was employed) had its origin in the Waikato in 1922/23 when 7,500 cows were placed under herd test, introducing a new era of simplicity and uniformity for farmers.

As a consequence, milking was not unduly delayed on testing day and samples were taken regularly month by month throughout the season.

Despite this innovation, some farmers were still unable to herd test due to the type of milking machine on farm. However, this problem was solved when the aptly named 'everyday' bucket was introduced in 1923/24.

In the 1925/26 season eight herd testing associations existed and controlled a varied number of groups, totaling 105,227 cows. It was at this point that the Government agreed to subsidise the movement by 1/- per cow for group testing and 6p per cow for owner or self-sample.

Calf identification

The Marked Calf Scheme began in the Waikato during the 1925/26 season. Until that time it had been common practice to slaughter pedigree heifer calves. The new calf mark scheme, for the first time, gave intending buyers confidence in the calf's lineage.

The scheme required heifer calves to be marked by tattoo and registered with the respective Herd Test Association provided its sire was pedigree and its dam had reached prescribed levels of production in not more than 305 days – as a two year old at commencement of test 250 lb of fat, three year old 275 lb of fat, and as a mature 300 lb of fat. The tattoo service was included in the Herd Tester's repertoire.

The Dominion Group Herd testing Association was formed in 1926 to provide uniformity in testing methods, the issuance of certificates and identification of cows under test and to provide adequate control of the Heifer Calf Marking system.

Herd Tester training

The first formal training for Herd Testers began in 1928 at the newly established Massey Agricultural College in Palmerston North, the NZ Dairy Board Annual Report of that year recording that "32 students attended and sat their examination." The course, held in the winter months, initially attracted "farmers' sons or young men desiring to make farming their life occupation."

NZ Dairy Board's Annual Report for the 12 months to 31 July 1930 notes the growth in demand and use of herd testing:

"It is quite safe to say that the rapid growth of this movement is most timely, for whatever may be said about over-production, the need of the moment, as far as the dairy farmer is concerned, is an increased production of butter-fat per acre, provided it can be done without proportionately increasing the cost of production per acre. And the improvement of herds, resulting from herd testing, offers the best opportunity for an advance in this direction."

1909 1922 1923 1924 1925 1926 1927 1928 1929

1909 First organised herd testing of 815 cows in the Wairarapa

Average per cow butterfat production 148 lb butterfat

1922 Group herd testing begins in the Waikato

1923 'Everyday' test bucket introduced which can be used on all milking machines

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1929 Average per cow production 218 lb (46% increase since 1909)

Extract from Mr C.M. Hume's 'History of the Inception of Group Herd Testing 1922-1945'

What a lady

"In the first season of the NZ Co-op Herd testing Association (1923/24) a very interesting position arose with the Hall Bros of Horotiu just outside Hamilton. They had been in partnership and decided to work separate farms. The problem arose as to how they would divide their herd of 80 cows which had, until then, been untested.

They finally agreed that they would toss a coin and the winner would have first pick of the 80 cows and then the other brother and so on until they finished up with approximately 40 cows each.

One of those cows, named 'Lady', was the last cow to be picked, in fact she wasn't picked at all, for the reason she was the last one left and the brother who had lost the toss had to take Lady.

His herd came under test and to the amazement of the brothers and the newly formed Association, Lady put up over 100 lb fat to the 30 day period on her first test. She repeated that performance again the following month, and her owner, feeling that she was entitled to something better than grazing with the herd, attempted to feed her with concentrates and all sorts of things. Lady however turned up her nose at it and did not settle down until put back with the herd again. She finished up that season with 630 lb fat and was, from the Association's point of view, a wonderful advertisement for the value of herd testing."

Two to a bed

"A testing officer who had given me very good service for a couple of years, at the end of the season asked, 'What group are you going to put me on next year?'

I said, 'Well you seem to have made a real good job where you have been working, I'm putting you back on that job'.

'I won't take the job.'

'Why not?'

'There is one farm there I'll never set foot on again.'

I said, 'You made no complaint about it before.'

He said, 'No I put up with it but I'm not going to put up with it again. He is the dirtiest farmer in the district, he leaves me to finish up at the shed while he goes up and cooks a meal, he is a bachelor, never washes his hands and, worse than anything, he's only got one bed and I've got to sleep with him and I'm not doing it again.'

The farmer in question was asked to provide accommodation for the Herd Tester, or cancel his tests."

The 'Pommie', the boys and the buggy

"In herd testing we got all sorts and types of men. Some we knew would not last long, but taking it all through we managed to get a fairly good type of officer.

We had some strange experiences with some of them. Some of the country boys were only too keen to play a lark on any of them who happened to come from the Old Country – 'Pommies' they would be called. One in particular was most amusing. This Officer always made a point in passing a certain hotel to have at least one drink before going on. He drove a buggy, a four wheeled conveyance, and the boys decided they would play a trick on him.

The hotel in question was situated at the top of a hill and this particular morning the Officer pulled in, in the ordinary way, had his drink and was rather surprised when three or four of the boys who were there pressed him to have one or two more.

They kept him in conversation for quite some little while and then finally out he went to get into his buggy, which looked strange. He walked around that buggy two or three times and then finally got in. The buckets were as they should be - telescoped and contained in a tray at the back of the vehicle.

He set off down the hill but hadn't gone very far on the flat before some of the buckets fell out. He couldn't understand it. He walked round that vehicle again but couldn't see a problem so reloaded the buckets and drove on. But off they came again. This time he tied them in place and continued on to the farm where the farmer in question quickly identified the problem.

Whilst he was being plied with drinks at the hotel, the lads had gone out and taken the large wheels off the back of the cart and put them on the front – putting the smaller, front wheels, on the rear."

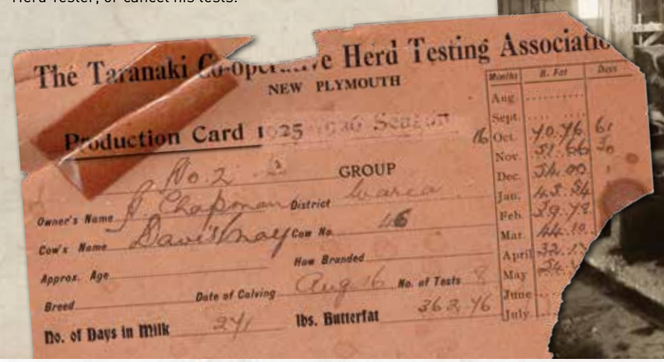
1924

The cost of a group of 1200 cows in the first Group Herd testing system in the Waikato was deemed to be :

Capital account	
Conveyance	£30.0.0
Horse	£11.0.0
Harness	£14.0.0
6 victory detectors	£48.0.0
test bottles (6 boxes)	£24.15.0
babcock tester	£10.0.0
Total of	**£137.15.0**

Upkeep	
Shoeing	£4.10.0
Feed	£13.10.0
Salary	£166.10.0
Sulphuric acid 12 tests for 6d	£22.10.0
Total of	**£358.9.0**

The allocation per cow spread over nine months at the rate of nine tests at 8 pence each, 8 pence per cow per month.



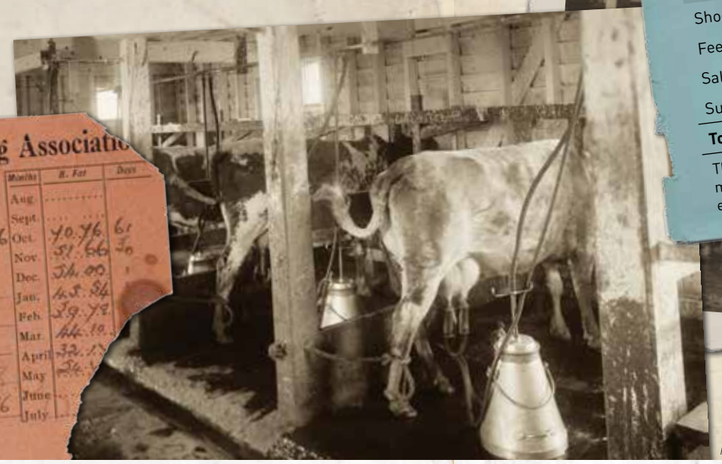
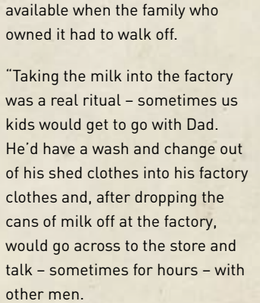


Photo: F J Denton Collection, Alexander Turnbull Library, Wellington, N.Z.

Ngaire (and Ewen) Black

Farmers, memories of the 1920s, 30s and 40s



Ngaire and Ewen met and married in the late 1950s, continuing to farm in the area they both grew up in – Manawaru in the Waikato – until they moved out of dairying and shifted to the Bay of Plenty around 1978.

"My father came out from Northern Ireland in 1910 when he was 10 and his parents ran a town supply farm in St Heliers in Auckland before they moved to Te Aroha West.

"That would have been around the time of the Great Depression and I think the Te Aroha farm became available when the family who owned it had to walk off.

"Taking the milk into the factory was a real ritual – sometimes us kids would get to go with Dad. He'd have a wash and change out of his shed clothes into his factory clothes and, after dropping the cans of milk off at the factory, would go across to the store and talk – sometimes for hours – with other men.

"We'd get bored waiting for him in the truck and by the time he'd get back we'd often have eaten all the inside of the new loaf of bread.

"Our farm truck was confiscated by the army during World War II; at the end of the War we got another truck and I remember the army number on its bumper.

"Ewen's parents had a herd of around 114 mainly pedigree Jerseys and were the second generation of Blacks on that farm. This was a large herd in those days.

"We worked on that farm after we were married and I remember the Herd Tester coming for the first time; I was pregnant with the first of our three children and recall cooking my best dinner amidst bouts of nausea – and the sympathy I got from Joan, the Herd Tester.

"She was a regular at the farm for a number of years, first with a horse and cart, and then a van.

"I remember the pride Ewen had in his herd; at the time it was the top producing herd in the Auckland Herd Improvement region doing 8474 lb milk with a 5.52 test, 4.68 fat in 285 days.

"Our cowshed was a six or eight double-up (two sets of cups) walk-through and when the children were young we'd take one cow out and put the children's cot there during milking."

1909 1922 1923 1924 1925 1926 1927 1928 1929

1909 First organised herd testing of 815 cows in the Wairarapa

Average per cow butterfat production 148 lb butterfat

1922 Group herd testing begins in the Waikato

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1930s

The Dairy Board's Annual Report of 1930/31 records that butterfat production improved 46% in the 21 years from 1909 (when formal herd testing began) to 1930 - from 148 lb per cow to 218 lb per cow. However, the Board also records disappointment that "only 20% of the total cows milked in the Dominion" are under test.

The 1/- and 6p subsidy which had been introduced in 1927/28 brought an element of uniformity to activities but limits to effective control remained, and the Dairy Industry Commission addressed this in 1936 when it established the New Zealand Herd Test Council to prescribe standards, methods and control all herd testing. All Herd Testing Associations were also required to be registered with, and affiliated to, the Herd Testing Council.

After representations to Government agencies and various other interested parties, a proposal that group herd testing should come under the jurisdiction of the NZ Dairy Board was subsequently agreed with some Government and industry funding. The Board assumed control of herd testing from 27 February 1936 when the 'Herd Testing Regulations 1936' were gazetted.

The Dairy Board established a Herd Recording Department, amalgamated the staff of the Dominion Group Herd Testing Federation and established the Herd Recording Council in an advisory capacity.

Herd improvement Plan

A proposal to the 1938 dairy industry Dominion Conference that the Dairy Board establish herd testing as a national service with financial assistance from the industry, if necessary, was unanimously supported by delegates and subsequently endorsed by the Herd Recording Council. In February 1939 the Herd Improvement Plan was approved by the Board, key elements included:

- The urgent need to increase the net financial return to the average dairy farmer.
- Reducing the costs of production of milk, noting that "Of the many factors which have a bearing on the production of milk and butterfat, the most important are pasture, shelter, water supplies, fertiliser, supplementary feed, productivity of the cows, the herd sire, disease, farm and stock management, and general agricultural education. In order to link up all such activities there is need, however, for coordination of effort by a producers' organisation which would have the dairy farmers' well being as its immediate interest."

The Council recommended that the Dairy Board seek the support of the next Dominion Conference to the following:

"That in view of the recognised benefits accruing to the Government and the industry through the more general and consistent adoption of herd testing, the Government and the Dairy Board be asked to provide in equal proportion a permanent annual grant of 2/- for each cow tested through the Licensed Testing organisations, principally for the purpose of

- encouraging the adoption of herd testing
- reorganisation of the existing Herd Testing Associations
- conducting a more intensive campaign (in collaboration with the Department of Agriculture and other educational institutions) for the dissemination of information among dairy farmers on present methods of scientific breeding and herd management ..."

The Board supported the recommendations, which were presented and unanimously endorsed at the 1939 Dominion Conference.

The result was the amalgamation of the 28 Herd Testing Associations into six Herd Improvement Associations to deliver improved economy, efficiency and uniformity. The six Associations were Northland, Auckland, Bay of Plenty/East Coast, Taranaki, Wellington/Hawke's Bay and South Island.

The Herd Improvement Plan was thereafter jointly funded by Government and the Dairy Board, Government funding reducing in 1972 and, finally, withdrawn in 1985.

Sire survey

One of the first tasks under the Herd Improvement Plan in 1939 was to ensure that, among the herds under herd test, the maximum number of sires used in the breeding of dairy stock would come under sire survey.

It was believed that "the herd sire is undoubtedly at least 40-50 times as important as any single breeding dam in the herd, and there appears to be no good reason why we should not apply the same standard of efficiency to herd sires as we do to breeding dams."

Analysis of sires under survey at that time showed that 28% improved production, 33% maintained production and 39% lowered production.

Consulting Officer service

The 1939/40 season also heralded one of the most important steps taken in the industry, the appointment of the first six Consulting Officers, one attached to each of the Herd Improvement Associations. Their role was to form a practical advisory link between the individual herd testing members, the Department of Agriculture and the Herd Improvement Associations.

The result was much more intensive use of herd recording returns from a feeding and breeding point of view by the testing dairy farmer. The services of the Consulting Officers were available to all dairy farmers irrespective of whether they were testing or not.

As the name implied, the Consulting Officer worked alongside successful dairy farmers, passing on methods which, in practice, had proved successful. They worked in co-operation with the Field Officers of the various Government departments, in certain spheres taking the lead, for example, improvement in breeding of dairy cattle and the widespread and thorough collection of material on dairy cattle nutrition and disease problems.

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1939 -1940 Consulting Officer service begins

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Axe, rifle, saddle and bridle -

Tools of trade for early Consulting Officers

The following is an extract from an interview with Hugh Kirton which featured in LIC's staff magazine in 2000.

The Advisory service began in 1939 with the appointment of six Consulting Officers. Some years later, young Hugh Kirton, a dairy farmer from South Auckland, was appointed Consulting Officer for 'the North', an area stretching from Devonport to Cape Reinga and which, by its geographical nature, required someone 'with practical ability and maturity'.

"My starting salary was £850 a year."

Standard equipment in those days was a second-hand A40 car and Hugh soon learned to always carry a spade and rope (in case the car got stuck on the mud roads of inland Northland), a saddle and bridle (as most farmers had horses to get around the farms), a slasher (to clear paths through the scrub and gorse) and a rifle (for dealing with wild cattle).

"In those days there was a lot of mixed farming with farmers running beef, sheep and dairy, so I had to give advice on everything; a jack of all trades."

Hugh's first forays into the hinterland of Northland followed an era when "tax inspectors set up in the local halls and investigated everybody. The whole farming district was terrified of being put into the list of tax evaders. So when I knocked on their doors and said I was from the Dairy Board and that I was there to help – and it wouldn't cost them anything – they couldn't believe it."

When Hugh first started as a Consulting Officer in Northland "around 80% was in gorse, scrub or bush, so 80% of my time was spent on development. And if it wasn't for the Marginal Lands Act, Northland would still be in the same condition today."

The Marginal Lands Act provided financial resource for the development of properties capable of becoming economic. Hugh recalls "the interest rate was 3%, which was added to the principal only after the property could pay its own way."

An average day for Hugh would see him spending a day walking/slashing his way around a block of, say, 200 acres (80 hectares).

"Land around Matakana had been dug over for gum and you never knew when you'd drop down a 30 foot hole. I dropped down a few small ones but no big ones."

Added to the gorse, the terrain and the possibility of gum holes were the wild cattle you might suddenly come across.

"You had to carry a gun. You'd come across wild cattle as you walked up a rise, taking them by surprise, and if there was a bull with them, he'd charge at you. You had to be able to protect yourself.

"These cattle had escaped from farms and gone wild - and they never wanted to be caught again. I've seen them crawling on their bellies to avoid being detected. They were all sorts with huge horns."

Having survived the walk, Hugh would then finish the day telling the farmer how much development was going to cost – and it'd have to be a close estimate as this was the basis for the application to the Marginal Lands Board."

Above: A nine cow plant shed at E.T Mercers, Whenuakura

Below: The herd test equipment Lindsay Budge had to pack into his car 1936/37

Lindsay Budge
Herd Tester, 1936-39

In August 1936, Lindsay Budge began herd testing under Trevor Daniell for 30 shillings a week, driving to farms in an old Nash car.

"Trevor and I tested 59 herds during the 1936/37 season. Two of us had to go to the largest herd of 165 cows, which was milked in a race shed without a pit. One of us read the ear tags and carried the milk to the other who was weighing and sampling.

"All our recording was done in duplicate, with the original copy going to the office and the other left with the farmer.

"To get a few days off at Christmas meant that we had to work every day from August without a break.

"I, along with an assistant, carried on until January, when I was promoted. I had just turned 18, so went to my parents at Westmere near Wanganui and, with their help, bought a brand-new Chevrolet half-tonne truck with a wooden tray for 273 pounds.

"In most cases we parked our vehicle near the cowshed. Pigs and cows used to rub on it and dogs used to piddle on it so we got a "lizzy coil" and connected it to the battery. Dogs would be the first to greet us by lifting their leg, but they soon stopped when we turned the coil on. They would take off wondering what had bit them.

"At that time, May 1938, I was in the Queen Alexander Mounted Rifles and a very keen rugby player, so I took up a position with the Manawatu Herd Testing Association in the Wanganui District with only 25 herds. I was required on several occasions to do check testing in various parts of the Association.

"I would check test if the Association wasn't happy with the results of a particular herd test. I had to conduct the check tests at the exact same times in the evening and morning as the previous test.

"Some of the sleeping conditions were rough. At one farm I had meals with the main family but slept in a room in an old cowshed. I hopped into bed there one night and looked up to find a scythe hanging over my head.

> "One farmer I stayed with was a very religious widower and father of two daughters. He found a rat drowned in the cream, and simply pulled it out by its tail, scraped the cream back into the can and threw the rat to his dog. The family ate the cream".

"In June 1939 I took over the lease of my parents' property at Westmere, supplying the Westmere Dairy Company with milk. I remember my father coming down to the cowshed to tell me war had been declared. I received advice that I would be required, so sold my herd in July 1940 and enlisted in the Air Force."

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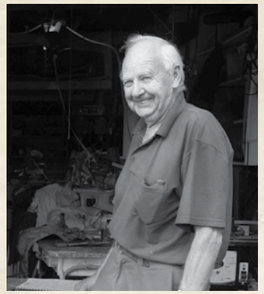
Ian Cullen Farmer, 1930s-1950s



Dairy farming is in Ian Cullen's blood. His grandfather, Fred Cullen, ran a Jersey stud on a Maungaturoto property from 1903, before passing it on to his two sons, one of whom was Ian's father, Ted (Edwin) Cullen.

The brothers split the property and Ted added to his half by leasing a 133 acre property next door to run dairy heifers.

"They herd tested their own animals using the Babcock method until 1937, when they started bringing Herd Testers in.

"Outside Herd Testers were perceived to be more reliable, which was particularly important with pedigree stock."

Before Ian had finished school, aged 15, he was running his father's lease property with the help of a stock agent and some assistants.

"We took in yearlings and reared them till they were just about to calve, then sold them off and took on another lot."

When Ian finished school he took over full management of the lease property, building a four-bale walk-through cowshed and purchasing 28 Jersey cows to milk when he was 16-years-old. He eventually bought the lease property from his great uncle, while his brother, Richard, took over their father's farm.

"I began to herd test shortly after I started milking – it was always quite fun. The arrival of the Herd Tester by horse and cart was interesting and created a bit of a stir.

"I would wait and watch to see the results. Having a pedigree herd, I wanted to see which cow would come out on top, and I'd get the results as soon as the Herd Tester did because I could read them off the glass."

Irene and Lloyd Seymore Farmers, 1931-1940

"Looking back you remember the vehicles used by early herd testers – on the West Coast it was old Model A trucks with a canopy or snub-nose Fortunes. This was before the War and they were dreadfully slow, 30 miles an hour downhill with a tail wind.

One herd tester was driving along the road one time and the wheel came off and ran alongside, and overtook, the car!"

SEASON 1934-1935

BAILY'S

IMPROVED

Record for Herd Testing

(Copyright)

Milk Production

Jack Lauder, Herd Tester

Terry Lauder's father, Jack, was a Herd Tester during the 1930s.

"Dad tested in the Colville area and used horse power creatively – getting his horse to pull either a cart or dingy (loaded with all Dad's herd test gear) when he needed to traverse the Whitianga Harbour to Cooks Beach. Apparently the horse obliged, happily pulling either contraption."

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1940s

Commercial artificial breeding

Artificial insemination work, which began in 1935, came to fruition in 1941 with the publication of the first list of proven sires by NZ Dairy Board.

Working from the Dairy Board's Ruakura based semen collection and processing research centre, the Artificial Breeding (AB) trials were progressively extended to the Matangi - Cambridge, and Te Hoi districts in the Waikato and around Palmerston North.

Finally, in November 1949, the first commercial AB service was introduced in the Waikato and Taranaki areas with 1596 cows inseminated.

Women's Herd Testing Reserve

The formal training of Herd Testers at Massey Agricultural College began in 1928 and was an all-male preserve until the outbreak of World War II, when the shortage of men (due to service overseas) saw the formation of the Women's Herd Testing Reserve. The following extract from 'The Development of Group Herd testing' by C.M. Hume records the changing face of herd testing during the War years.

The course at Massey continued until 1949 when, after the amalgamation of the small Herd Testing Associations, the consolidated associations took over full training of new officers.

Year	No on roll	Gender
1928	33	All men
1929	78	"
1930	69	"
1931	27	"
1932	45	"
1933	34	"
1934	56	"
1935	21	"
1936	29	"
1937	15	"
1938	50	"
1939	26	"
1940	54	29 men, 25 women

Year	No on roll	Gender
1940	27	All women
1941	86	"
1942	25	"
1943	33	4 men, 29 women
1944	69	12 men, 57 women
1945	72	29 men, 43 women
1946	77	All men
1947	53	"
1948	44	"
1949	35	"

The following letter, dated 12 December 1942, gives an indication of the spirit 'girls' took into their work :

"Dear Mr Carbines (Manager of the South Island Herd Improvement Association)

You will be interested to hear from me and what I have been doing. I am sorry to have to tell you I had an accident a couple of days age, but thank goodness it was nothing serious.

"I was coming over the Maruia Saddle to Brooks when a piece of the harness came unput, and I was doing my best to fix it when the horse took fright and reared round before I could catch her. She was off down the road at 60 and I followed behind at 30. There were heels, dust, stones and buckets flying in all directions. I knew she would come to grief soon as the road is steep and the bends sharp. It happened just before the Devil's Elbow on the Saddle side.

"I was all alone and no one for miles and I saw the cart upside down on the side of the road with two rubber wheels in mid-air. The front of the cart was caught on the stump of a tree which prevented it from rolling down the bank. The shafts were stuck out in mid-air and the horse was lying underneath the shafts. The harness was still tied to the horse and the cart, though all the breeching part was broken. The straps on the cart were so taut I couldn't move them. I was going to cut them to free the horse as I thought her legs were broken. However she stood up when I went to her.

"I took all the harness off the horse, as she couldn't move without causing further disaster. The bank was steep but she had room to stand and was shaking all over. She followed me up to the road with four sound legs and nothing worse than a few scratches here and there. I never looked at any of the gear. It was all thrown head-first down the bank. The horse and I walked slowly home. I rang Brooks and told them I would not be over that day on account of the accident.

"Bert Rollinson and I went up after tea to see the shaft of the cart was broken, otherwise it was sound. All the gear was spread up and down trees, and buckets and bottles of all shapes and sizes away down the gully. I had two 50 sample boxes with me. They were broken but may be able to be repaired. I recovered 65 bottles, one out of a hole, and only five were broken out of 24. That was wonderful. We collected as many corks as we could find, though many were lost. The acid missed the horse by inches. The gallon jar was full, the box smashed and the top broken off the jar. The bottle of alcohol was still intact and the machine is quite good.

"I was extremely lucky to come out of it all with sufficient gear to carry on with. Bert took me over to Brooks' the next morning in his truck with all the gear and I only lost one day. He cut a stick of wood out of the bush and hand-made a shaft to replace the broken one - it was really very good indeed, not so heavy as the other one.

"The horse backed into the publican's car one day in Murchison - the only decent car in town. There was a little damage done and I have heard no more about it."

CM Hume (The Development of Group Herd Testing in New Zealand 1922-1945) recalls receiving a letter from a farmer on 8 April 1942, registering the typical reaction to the news that the traditionally all-male service would now be fronted by women :

"It is eleven years age this month that I attended the Herd Testing Course at Massey College and I was one of the 30 odd students that joined in the long and hearty laugh when the then Dominion Superwiser of Herd Testing said, 'The day may come when we will have lady Herd Testers.'

"Well sir, I have just had my third visit from a lady Herd Tester, and if this is a fair sample, they are in every way as capable and efficient as the men ever were.

"I worked for nine seasons on the testing and believe me this young lady has a difficult district to work with a horse and cart, very indifferent gear to work with, and exceedingly unpleasant weather to cope with. Yet in spite of it all, she does her job cheerfully and accurately. I offer my congratulations to those who are doing so much to keep this vital work in action."

1940 — 1941 — 1949

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Nancy Hammond (2nd from left) Massey College

Nancy Hammond (top left) Massey College 1940

Nancy Hammond Herd Tester, 1940

At 16 years' old, Nancy Hammond (now Cram) was the youngest student in Massey College's 1940 Herd Test training intake.

She had just left school and moved from Marton to Papamoa with her family because her father, who had been exposed to gas in World War One, was suffering respiratory problems and hoped the warmer climate of the Bay of Plenty would improve his health.

Nancy travelled by train from her parent's farm to Palmerston North to complete the two-week Herd Testing training, which involved learning the mechanics of herd testing and how to complete sire surveys.

"I boarded three miles away from the Massey campus and had to leave home at 4am each morning to cycle to Massey in time for a 5am start. I remember how cold it was."

On completion of her training, Nancy headed back to Papamoa to herd test.

"It was pretty tough. I had to get up with the cows in the morning, then herd test all day, moving from farm to farm."

Nancy would take a horse and cart to the first farm, where she would put the horse out to graze while she worked.

"The roads weren't very good, all gravel and full of potholes, but we thought nothing of it.

"Cows in those days were double-stripped, meaning they would be milked at cups-on first, and then finished by hand. Farmers believed the best cream came out by hand.

"I didn't last long as a Herd Tester – just one or two months. When my father saw the work I was doing, he said the buckets were too heavy and I was too small to carry them.

"Instead, he got me helping out on his 64 cow dairy farm – his health was deteriorating more and he needed my help."

Paddie Flamank (nee Richards)
Herd Tester, Early 1940s

Reprinted from LIC staff magazine 2000

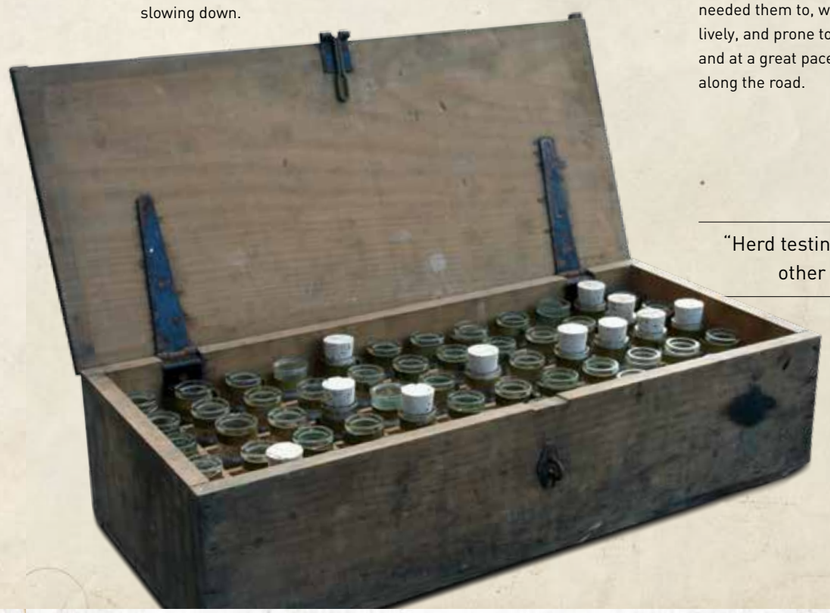
"Oh my aching head. Nearly every second farmer made homebrew – it took me at least two months to get the hang of it.

"Lazy was the general rule for the horses, they just went from farm to farm and got very well fed in the calf paddock. There was always the exception though and I well remember my arrival in Morrinsville where I was given a horse that had received some training for a career as a racehorse – a trotter.

"I can still see myself on that first day sitting in the cart behind him. I flicked the reins, the horse started down the road and took off, turning into a gateway without slowing down.

"All of two minutes later we were rushing round and round the paddock with the gate decorating his neck and me, in the new skirt and jacket I'd just bought in Auckland the day before, yahooing my head off (in my best cowshed baritone).

"The farmer was soon out with his sons in the farm truck, following, and one of the sons managed to climb onboard the cart and stop the horse."



Edna France Herd Tester, 1940-1945

"I didn't relish the idea of giving up the herd testing car in exchange for a horse, even if it was necessary due to the war and fuel rationing.

"I had an old Dodge. It was big, clumsy and reliable, had a lot of room and always started when I needed it to. Whereas horses wouldn't go when you wanted them to, wouldn't stop when you needed them to, were flighty and lively, and prone to quite suddenly, and at a great pace, just belt off along the road.

"I'd grown up in rural Waikato – dad had about five or six cows at that time – but then I trained as a tailoress and lived in Auckland. I was straight out of town and into herd testing when I was 20.

"I became a Herd Tester as part of the war effort, when women filled roles previously held by men, and I worked in the Waikato for around five years, from 1940.

"It was common practice for young farm workers to play tricks on us young Herd Testers. One time, four boys tried getting one over on me. We had all the cows in one place when the electricity went off – which meant we'd be working very late. I offered to help with the milking as long as they gave me easy cows. Well they thought it would be amusing to give me an old, very difficult cow that gave hardly any milk. But I got the better of them, milking the cow and getting more milk out of her than they could manage.

"The only reason I stopped herd testing was to get married, when I returned to Auckland.

"Herd testing was an experience you couldn't gain any other way and I'd go back to it tomorrow."

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The Gerber method of herd testing

The Gerber method of testing was used until milk meters were introduced in 1967.

The Testing Officers' Hand Book, which was provided to all testers, first cautioned Herd Testers to 'stand in a convenient position from where milkers can be kept under observation, but as unobtrusive as possible." They were warned to "make as little noise as possible" and "to place buckets down" rather than drop them.

Testing procedure to determine the fat content of milk:

- Make sure the rack is marked so No.1 butyrometer is in the back left-hand corner of the rack and No 24 is in the front right-hand corner.
- Make sure butyrometers are clean and free from fat, by inverting and shaking to remove any surplus water.
- By means of an automatic tilt measure or acid pipette, deliver 10cc of sulphuric acid at 60˚F into each butyrometer.
- Remove sample bottle of milk from arming bath and thoroughly mix the sample to be tested by shaking vigorously. The milk should be at a temperature of 60˚ to 70˚F. By the use of a milk pipette carefully measure 11cc and add to the No.1 butyrometer, allowing the milk to flow down the inner side of the butyrometer.
- Repeat for the remaining samples.
- After drawing off sample, return sample bottle to sample box, do not replace cork.
- Add 1cc of amyl alcohol at 60˚F using an automatic tilt measure or appropriate pipette.
- Place the rubber stopper in the neck and screw in tightly.
- Place the copper rack cover in position and shake vigorously to mix the contents of the butyrometer. Invert the rack two or three times in order to mix all constituents, but be sure milk is not allowed to enter the bulk of the butyrometer.
- Transfer butyrometers to the centrifuge placing them in an anti-clockwise direction with the bulb to the centre and with the first bucket marked, preferably by paint.
- Whirl for four minutes at a speed of 1100 revolutions per minute.
- Remove from centrifuge and place in hot bath, with water at 154˚F (checked with a thermometer) for two minutes keeping the level of water above the level of the fat column.
- Read the tests by holding the butyrometer upright at eye level and manipulating the stopper until the bottom of the fat column is on zero or one of the whole numbers on the fat column. Manipulate the stopper by screwing further in or withdrawing.
- Read fat content from the bottom of the lower meniscus to the bottom of the top meniscus.

Dorothy Wood Herd Tester, 1942-1946

"I was a farming girl, and grew up dairy farming. We worked with horses on the farm – we didn't have such things as tractors then - and I loved the horses, which is why herd testing caught my eye.

"Before leaving home Dad wouldn't let me go to dances or anything, so when I turned 21-years-old and became a Herd Tester, I really did get the key to the door. I became completely independent and took my bike on my cart with me everywhere, so if there was a dance, I could ride to it."

Dorothy says her first herd testing horse only lasted a brief time.

"How do you stop a horse going backwards? That's a very good question and one I needed answers to with my first horse, because it would back up and not stop. I never did find out how to stop it, but it didn't matter because I got another one, called Pluto.

"Pluto was a pacer and I travelled to Whakatane to collect and bring him home to the family farm in Otakiri, near Matata on the way to Kawerau.

"Pluto didn't need teaching where to go – he knew which gate to turn into and missed turning into familiar gates when they had rescheduled or cancelled.

"On the way home with Pluto one day, the train out of Edgecombe Station waited until we were opposite and blew its whistle. The poor horse jumped and I went off the back of the cart and landed on my elbow. I expect the driver had a damn good laugh. Fortunately Pluto didn't take off, and my friend Ivy was able to grab hold of the reins until I got back in the cart."

Dorothy remembers a few farmers trying to cheat the tests.

"Us young Herd Testers weren't as green as we were cabbage-looking. I had farmers who would try to get 26-hour days by milking early at night when they thought I was coming. There were a number who would try and fool me.

"I caught one farmer out when I arrived at his farm earlier than I would've normally and found he had rushed off and put the cows on green oats. That same farmer would also strip his cows into separate buckets, then when I had weighed the milk and taken a sample, he would say he'd forgotten to put the strippings in that milk and ask me to take some off to put in the sample. I wouldn't and always said 'no'.

"After I had been testing for a few years I got offered a van. I turned it down because I liked the horse and cart, that's why I went herd testing."

Dorothy stopped herd testing when she got married.

"I met Alf at a dance in Tauriko Hall. At the time he worked on a dairy farm for his brother-in-law."

After marrying, the couple worked for wages and then returned to Dorothy's family farm. After three years her parents retired to Tauranga and she and Alf took over. They later bought a farm in Albany and then two side-by-side properties in Kaharoa for their two children, Barbara and Peter.

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Roma Jenkins Farmer, memories from the 1940s

Taranaki woman Roma Jenkins has childhood memories of Herd Testers visiting the family farm in the 1940s.

"A lot of Herd Testers during the war years were women and this sudden influx of young, single women naturally resulted in some anxiety amongst local women at these visitors working on the farm with the men.

"As children we weren't allowed in the cowshed during herd testing and certainly weren't supposed to be there when the Herd Testers were working because of the dangerous substances (acid and alcohol) they worked with.

"However, like most children, we didn't always obey the rules and, as it turned out, were in the shed one day when my younger brother, Shortie, accidentally banged into something, spilling acid all over him.

"Without hesitating, the Herd Tester grabbed Shortie and plunged him into the water trough before he even had time to take a breath!

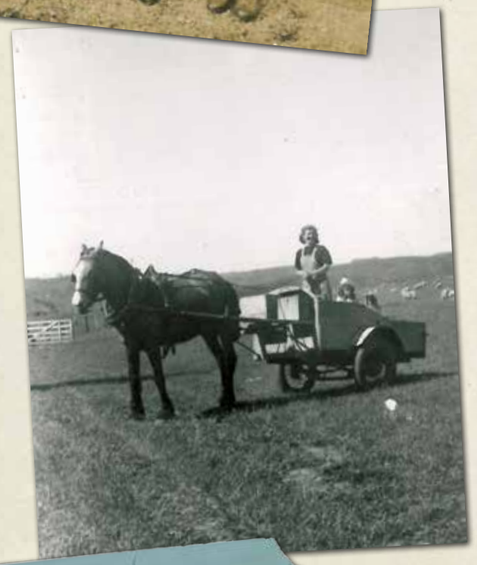
"My father wanted to know what was going on, Shortie was his precious baby boy and he was about to give the Herd Tester a telling-off for putting him in the trough, but he ended up thanking him and being very grateful because the Herd Tester's speedy reactions saved my brother from serious burns, if not his life.

"We lived up a steep hill and there was a track to the house. I remember coming outside after breakfast one day to see the Herd Tester's car running backwards down the hill – without the Herd Tester, who hadn't engaged the handbrake. The car ended up at the bottom of the track in the hedge and I managed to get a photograph with my camera, despite the Herd Tester's best efforts to stop me. I think he was embarrassed."

Top Photo: The car that ended up in the bottom of the track, in the hedge.

Top: Christine Bracks (far right) with Cath, Les and Muriel at Agina House Massey College June 1946

Middle: Christine Bracks Kai Iwi 1946



June Holloway 1940

"The wives were always ready to have a chat as they didn't have much of a social life and the young farm helpers (usually a son or sons of the owner) would spruce themselves up and slick their hair back with hair oil to impress me."

Above: Christine Bracks, Brunswick, Wanganui 1945
Left: Christine Bracks herd testing at Lairds Farm, Westmere, Wanganui

Christine Bracks Herd Tester, 1945-46

"My fear of the manpower committee saw me move from floralistry to herd testing in the closing days of the War.

"It was a pretty daunting prospect, as an 18-year-old, to go out with a horse and cart and sleep at a different farm every night. I remember stopping outside every gate for the first month, crying at the prospect of what waited for me down the drive – not the cows, but what the farmers would be like, my room, my bed.

"VE Day was a day to remember. It was pouring with rain, I had the longest trip on my run and felt very sorry for myself. I sat in my cart, tears streaming down my face as I imagined all my friends back home in Dunedin having a wonderful time celebrating VE Day and having a big party. I remember buying two bananas for my lunch and thinking 'it's no good crying' and then laughing at myself and carrying on.

"You came across all sorts of people, different religions, beliefs and ways and it broadened your knowledge as you stayed with these people in their homes.

"One family kept trying to convert me to their religion, they were a lovely family but very strict. I liked a cigarette after my meal – I only smoked one or two a day – but this family absolutely forbade me from smoking. I remember lifting the big heavy sash window in my room and leaning out of it to have my cigarette – I felt so guilty and was so worried they would smell it that I didn't enjoy it and put it out. I continued smoking my one cigarette after my evening meal for many years, except when herd testing at that farm.

"Herd testing became my way of life. I was always treated with courtesy and respect and made strong friendships, usually spending my days-off on one of the farms on my round. I had three marriage proposals during my time as a Herd Tester from farmers and farm workers, but didn't accept any because I was too busy loving life and socialising.

"The farmers took a special interest in you. One time the centrifuge blew up in my face when I was a testing. The farmer and his wife had four disabled sons and one daughter, and I remember running into the house with a wet towel around my face and the wife dropping everything to drive me into the hospital. Now, in those days that was a big deal. I was treated immediately by the doctor and fortunately had no damage to my eyes.

"I had a lot of fun staying on farms and herd testing – I went on many possum and rabbit hunting shoots, attended 'the odd barn dance' and one night I went gathering wild honey – and didn't even get stung – what a wonderful experience, especially as I love honey.

"I love horses and had a love hate relationship with my horse Creamy – named after his colour – I think he had been knocked about before I got him, but we got used to each other and in later years I went on to train horses.

"I did eventually meet the man I wanted to marry, he was a farmer and had served in the Armed Forces; we were allocated a farm in the King Country.

"Running a farm is hard work. We milked 45 to 50 cows until our three children finished boarding school. It was a great life."

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1949 First commercial AB service introduced in the Waikato and Taranaki.

Nolan Dunn Herd Tester, 1946-47

Nolan Dunn studied herd testing at Massey University in June 1946, before becoming a Herd Test Sampling Officer in Dargaville for six months, and Kaiwaka for another six months.

"The job gave me a lot of free time in the afternoons. One pleasant memory is the day I took two farmer's daughters (16 and 18-years-old) for a climb up 'Hawk Hill'.

"We kicked our gumboots off at the bottom, climbed up the steep hill-face and had a dance when we reached the top."

Nolan's first job in Kaiwaka was Herd Test Sampling for the owner of a pedigree herd.

"He watched over my shoulder the whole time – I was so nervous."

Sleeping arrangements varied from farm to farm.

"I was sleeping at the house of an Exclusive Brethren family, and they put me on a rather short couch in their lounge. In my sleep I forced my feet through the wooden panels at one end of the couch and could not remove them.

"After a big struggle, and the loss of some skin, I was finally able to get them out. On my next visit I was upgraded to a spare bed in their son's room.

"Sometimes a mother would put her small child in the cream can with a few toys to keep them out of trouble while she helped with the herd test.

"I remember one boy of about six or seven telling me he liked it when I came to their farm. I asked why that was, thinking he must enjoy my company. He said, 'Because mum usually cooks something special when you come to stay'.

"I grew up on a dairy farm, but had an older brother who was likely to take it over so one mechanically-minded farmer I was herd test sampling for suggested I take up a motor mechanics' apprenticeship to learn another trade.

"In 1948, while I was working for a small country garage in Mangawai (Hakaru), I went to a country dance and met Val Rasmussen who, coincidentally, was also a Herd Tester.

"I was 20 and can still remember the dress she wore – it had pictures of birds and nests on it. She had the most beautiful hair.

"The MC at the dance was a farmer who Val had been herd testing for. The following Monday he came into the garage where I was working out of sight under a car. My boss and he started asking where a feller could get a double bed – I knew they were having a dig at me.

"Val was herd testing in the Tangatoria region, but because she had to work 25 days straight, I would sometimes organise with farmers to herd test on their farm, while she herd tested on another, so that we could make another day to see each other."

Nolan married Val in 1950, when he was 23 and she was 21. They were married for 52 years, before Val passed away in 2002.

Nolan Dunn (18) and sister Melva (15) on family farm in Kaiwaka, 1946

Val Rasmussen - married fellow Herd Tester, Nolan Dunn, in 1950

Audrey Carter Herd Tester, 1943-1944

"Herd testing was something to do during wartime, as it was a very boring time for ladies.

"I didn't know a thing about cows or horses, but told my mother I was going off for a year to try something different (at the age of 21 years) and I never went back.

"When I started herd testing it was all new to me, but after training at Massey Agricultural College and then herd testing on farm, I became passionate about farming and knew that was what I wanted to do. I learnt about farming from the best dairy farmers and I, in turn, became a good farmer.

"Herd testing was a good life – I expect it still is, it was a great experience and interesting living with different people every night. It was OK as a woman Herd Tester – the farmers and their wives liked you to come in and have a big meal with them. I don't think they had a lot of visitors.

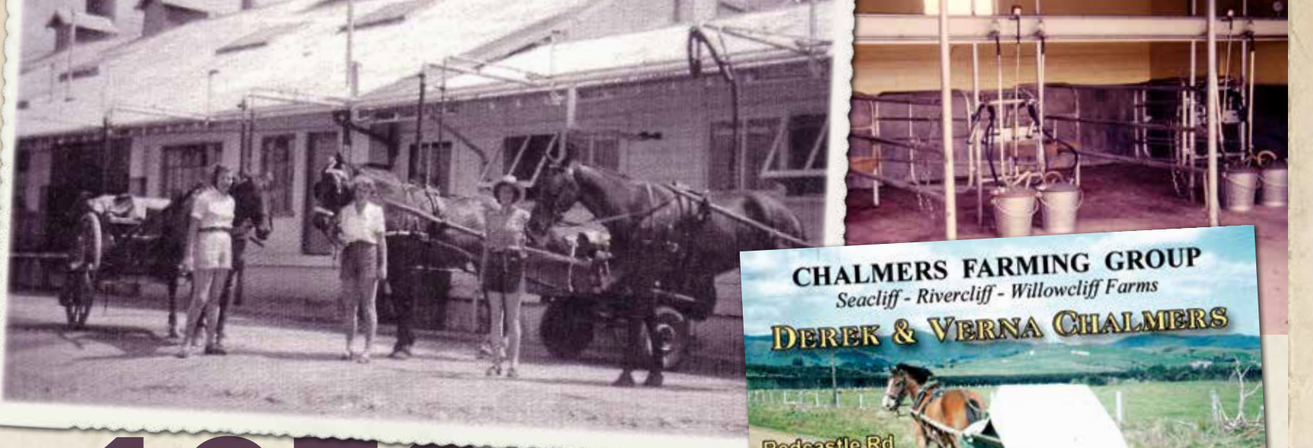
"I'm 86 but I'd go back to herd testing and milking cows today; I don't know how I'd milk them, but I'd try."

1941

1941 NZ Dairy Board publishes first list of proven sires.

1949

1949 First commercial AB service introduced in the Waikato and Taranaki.



1950s

In 1950 the Dairy Board assumed responsibility for the commercial development of a national Artificial Breeding (AB) service, the first bulls were purchased for proving and an AB Committee was appointed to oversee the development of the service.

By 1951 nine AB groups were operating in New Zealand, four in the Auckland Region, two in Wellington/Hawke's Bay, two in Northland and one in Taranaki.

The development of artificial insemination techniques and semen extenders was paralleled by development in sire survey methods.

In 1952 the Dairy Board purchased a 61 acre farm at Newstead in the Waikato at £200 per acre and established the Newstead AB Centre, which was completed the following year.

The six Herd Improvement Associations were asked to operate the new service at farm level, the resulting establishment of a seasonal inseminating network of, predominantly, dairy farmers was to prove one of the most important strategic decisions ever made in the industry.

As word spread about the positive benefits of AB, demand grew and the AB Committee resolved .

"That provision be made for servicing approximately 80,000 cows in the 1954 mating season, this coverage to be achieved by an increase of two-thirds in the total number of Technicians authorised by the Committee for the 1953 mating season (viz. 46) making a total of 77 Technicians."

A total of 77 groups were allocated from the 122 applied for and semen was charged to the Associations carrying out the inseminations at 10/6 per dose for pedigree cows and 5/- for grade cows.

The Herd Recording Council (renamed the Herd Improvement Council) increased the number of Consulting Officers to 12, introduced a rating system for sires, surveyed farm practices and output per acre, fertility, metabolic diseases, mastitis incidents and bloat. It also appointed qualified staff to further develop semen technologies, and this led to bulls used for AB being classified on the storage qualities of their semen.

In 1957 232,000 cows were inseminated.

Alternate month herd testing
The Alternate Month system of herd testing was introduced in 1957. Until this time all herd tests had been carried out on a monthly basis.

Derek Chalmers
Farmer, Oamaru 1957

"I herd tested during the late 1950s and early 1960s in Northland and the photo on the business-card for my agricultural contracting business, shows the horse and cart I used in those days.

"I'd go into town (Kaitaia) once a month for a hair cut, to bank a cheque to save up to buy a farm, and get the horse shod. Wages were £12 a week or £600 a year."

Reta Fendall (nee Shearer)
1950-1952 herd testing in Scotland and 1952-1954 herd testing in New Zealand

Reta Fendall arrived in New Zealand in 1952 with more than a suitcase – she came with her friend, Jean, and with two years' experience herd testing in Scotland.

"We had been thinking we'd join the Metropolitan Police in London but then saw an advertisement in the Scottish Farmer for herd testing in New Zealand. We thought we'd give it a try and could always come home after two years if we didn't like it."

Reta had only been herd testing in New Zealand for about six weeks when the dairy shed she was working in was hit by a tornado.

"I had 15 herds along Piako Road on the Hauraki Plains. It was peat country and all the farmers along that road wanted to herd test.

"I was working with a young, single male sharemilker, David, on a farm owned by a young couple with a small son.

"We'd had breakfast and I had gone down to the separating room, David was in the shed.

"I had the auto pipette with acid in it and was about halfway through putting the acid into the bottles when David shouted, 'Look out Reta there's a tornado coming.'

"I thought 'oh yes, right oh' (it was common to try and play tricks on the Herd Tester) but something in his voice made me look out the window.

"What I saw through the trees was very frightening. The iron covering a haystack on the neighbouring farm was peeling back like bits of paper and the force that was doing that was heading straight for us.

"We grabbed the little boy we were watching, Garth, and dived into a low lying swampy bit outside the shed. I could feel the tornado trying to suck us up. The suction was incredible, it was pulling at us, and we both just held onto that wee boy between us.

"I risked lifting my head and saw my cart become airborne – heaven knows where Pinkie, my old horse was.

"But that wasn't the only thing that was on the move – the roof of the cowshed was now some distance away, standing upright in the ground. Milking and herd testing equipment was strewn everywhere.

"I obviously couldn't do a test that day so did an estimate and spent the day waiting for new equipment to arrive as I had no bottles, acid, alcohol or pipettes; it had all gone."

Reta's initial reservation about staying in New Zealand for more than two years didn't account for the tendency of farming communities to match-make single Herd Testers with local farmers.

"John Smith was the farmer they wanted to match me up with and I was introduced to him at a dance. I remember liking what I saw because he was clean, handsome and wasn't a bad dancer; he also had a lovely Ford V8 car which he took me home in.

"We married in April 1954 – 21 months into my 24 month herd testing contract, so I thought that would mean I'd have to repay the £80 single passage. However, when the clerk in the office found out I was marrying a dairy farmer, he simply wished me good luck and I didn't have to repay the bond.

"John was one of five sons; his father was a pedigree Jersey breeder with a farm, which had been broken in from raw peat, on Piako Road. Each son had to work on the family farm and bank all the money earned, and then their father set them up with a deposit for their own farm.

"We started out with 40 cows and gradually built up to 75 cows as we broke the land in. Later we bought a going concern farm at Pikowai (Bay of Plenty) near the sea with a herd of lovely big Friesians."

> Reta had only been herd testing in New Zealand for about six weeks when the dairy shed she was working in was hit by a tornado.

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Alternate month herd testing introduced in place of monthly herd test

First Herd Testing horse, Bess 1948-1954

Morris Truck 1948-1954

Lyn Pendergrast (nee Allan) Herd Tester, 1948-1954

"I was a child during the Great Depression so our family never had spare money – we didn't have a fridge and I remember my dad burying butter in the backyard to keep it cool. The deprivations made an impact on me and I remember thinking things would be different when I got older."

Lyn grew up in rural Kaiwaka and recalls rushing home after school each day to help two local farmers with milking.

> "I left school when I was 13 and went to work on a local dairy farm earning 10/- a week. I was very focused on making my way and always banked half my pay.

"It was pretty remote – friends were few and far between – so I'd always look forward to a visit by the local Herd Tester, Patience Sommerville.

"Whenever I knew she was coming I would walk for miles to meet her and get a ride back with her on the cart. We were good friends."

It was through Patience's influence that Lyn took up herd testing. After graduating in 1948 she was given a round of 25 farms in Kaitaia – along with a horse and cart.

"My first horse's name was Bess. I had her for most of the season, until I visited one farmer whose shed was at the bottom of a steep hill. When I was leaving the next day, Bess got about a third of the way back up the hill and decided she wasn't going any further, so she gibbed (backed-up). The cart came backwards and went off the side of the road. All the herd testing acid and alcohol flew everywhere and my clothes flew out of my suitcase. It was a mess. I had to stay at the farmer's for another day until the herd test convenor bought me another horse, because Bess wasn't going anywhere."

After five years Lyn's careful savings paid off and she was able to put a deposit on a small Morris truck.

"Once I had the Morris I loaded all my worldly goods in the back and shifted from Northland to the Waikato. I think I just wanted a change of scenery, but I continued herd testing, relieving at Rotowaru, Rotongaro and Te Kauwhata."

The move paid off, in more ways than one. In 1953 Lyn met the man who was to become her husband, Bob Pendergrast.

"We met in the cow shed and got married in 1954. I gave up herd testing then and worked on our farm."

Bob passed away 20 years ago, but Lyn is still farming with her son, Charles, at Elstow in the Waikato.

"I love the outdoors and animals. I'm nearly 80 but here I am, still farming."

Bob Geddes who herd tested in the 1950s at work on his Banks Peninsula run preparing samples for testing. Rather than lift the heavy wooden box carrying the centrifuge, he would test at the back of the truck.

Bob Geddes
Herd Tester, 1950s

Noreen Gallagher Herd Tester, 1950s

Marriage proposals were an occupational hazard when Noreen Gallagher (nee Scott) herd tested in Otago in the 1950s.

But it was a sheep farmer, not a dairy farmer, that eventually won her heart.

"You get to know the farmers, get to know their kids and cows. I had a few proposals of marriage in those times. I don't suppose they saw many girls. The herd tester would be about the limit."

One night, the power went off at one of the bigger herds. Initially she didn't let on she could milk a cow, but eventually owned up and helped out with handmilking.

"We took a bit off each cow to relieve her. We were there until after midnight."

The smallest herd was seven cows for the grounds-man at Balclutha High School, which were handmilked.

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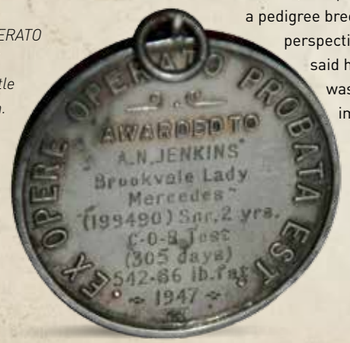
Alan and Dorothy Jenkins Farmers, 1950s to 1990s, Taranaki

Photo of medal:
In the earlier years the Jenkins family used to herd test for the COR testing (Certificate-of-Record testing of purebred dairy cows). Alan said they would select three cows for special COR testing by the Herd Tester. The authenticated butterfat record test was performed three times in one day and a medal was given to the highest fat-producing cows. The medal still has pride of place in Alan and Dorothy's farming memorabilia.

Medal reads:
Awarded to A.N. Jenkins
Brookvale Lady Mercedes
199490 Snr. 2yrs
C.O.R. Test
(305 days)
542.66 lb fat
1947
EX OPERE OPERATO
PROBATA EST.
NZ Jersey Cattle
Breeders Assn.



Alan clearly remembers – down to their names – the Herd Testers who worked on his father's Jersey stud in Taranaki during the 1950s.

"A lot of the Herd Testers came to New Zealand from England and had a contract to work for two or three years. The men who herd tested on our farm took a real interest in our cows and learnt all their names. They took the confidentiality of their job pretty seriously and wouldn't talk about other herds or farms.

"There were always special breakfasts when the Herd Tester was there, which was pretty good, but it always meant more work for my mother.

'Mum would say 'the Herd Tester is coming, I must get some sausages in' – Colin (one of the Herd Testers) used to say he had sausages at all the farms he tested on, so it must have been the thing for all the farmers' wives in our area to do."

From a farmer's, and particularly a pedigree breeder's, perspective Alan said herd testing was very important.

"We needed herd testing so we could keep accurate records for selling cattle. People were always interested in the herd testing results and in how the cows were performing on farm and it added another point of interest for us as breeders. Non-performers were given a one-way ticket off the farm.

"We always herd tested, whatever the weather, but there were some farmers who'd say no to testing if it was raining because they were afraid a bad day would have a negative impact on the results."

Alan moved off the family farm in 1968 and went 50:50 sharemilking.

"When I was sharemilking I'd herd test a couple of times each year to get an idea of how my cows were performing, but I didn't herd test every year as I was saving to buy my own herd.

"However, once I had established my herd in 1977, I immediately resumed herd testing and continued to herd test every year I farmed (until the 1990s).

"Herd testing gave me more interest in my cows. If I had not herd tested I would not really have had an accurate idea of my herd's performance. Through herd testing I was able to see the different cow family traits, and follow them through the herd. I milked 90 cows and it gave me a better understanding of all those cows.

"I always valued herd testing for the information it gave me. Initially I would test every month, then went to testing four times a year – but I always found monthly testing more accurate for my records."

Henry Stol
Herd Tester, Late 1950s

"My experience with horses was nil before I became a Herd Tester. The horse I was supplied with was an ex trotter and always wanted to go fast. On my first day I got to the farm and turned the horse out into the paddock.

"The next day, after the testing was finished, I had to catch the horse and put him in harness. I loaded the cart to go to the next farm, which was the neighbour's, and hardly had the last bucket onboard when the horse took off.

"I jumped on and had to stand on the back of the buggy just like a Roman soldier to try and slow him down, but he went his own way across the paddock and over a four-foot bank. I heard a loud crack and the buggy broke in half.

"The horse continued to go hell-for-leather. I finally managed to steer him towards the gate to the road. The farmer rang his neighbour and told him to open his gate quickly because the Herd Tester was coming, but by the time he got it open the horse was already well past his driveway, galloping full-bore.

"Luckily a motorist saw what happened and passed us, stopping and standing in the middle of the road waving his arms. That was enough to bring my horse to a standstill.

"I was understandably relieved when that horse was replaced with a big old carthorse called Patch, which only had one speed – very slow. His hooves were so big he could walk over cattle stops without me having to open the gate."

Colin Monks (Right) Herd Tester, 1955-1958 in Waikato

Colin Monks Herd Tester, 1955 – 1958

Growing up in urban Nottingham, England, young Colin Monks dreamt of being a farmer but admits it would have been a pipe-dream if he had remained in England, so in 1955 he applied to come to New Zealand as an assisted immigrant to be a Herd Tester.

After training, Colin was stationed in the Waikato, his mode of transport a rubber-tyred cart pulled by an ex-trotter named Joey.

"Herd testing opened a lot of doors for me – I met my wife, Dawn, and a farmer who invited me to go into pig farming with him.

"After seven years pig farming, Dawn and I bought our first farm and progressively got into dairying.

"Today our two sons operate two large-scale dairy units (1350 cows on 567 ha).

"We'd never have done any of this without herd testing. It gave me memories and a legacy."

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1960s

In 1961 the Herd Improvement Council replaced the AB Committee as the policy making body for AB. The same year saw the introduction of the Sire Proving Scheme, and the opening of the second Dairy Board AB Centre at Awahuri near Palmerston North.

The Newstead AB centre supplied semen to the Northland, Auckland and Bay of Plenty and East Coast Associations, while Awahuri supplied Taranaki, Wellington/Hawke's Bay and the South Island.

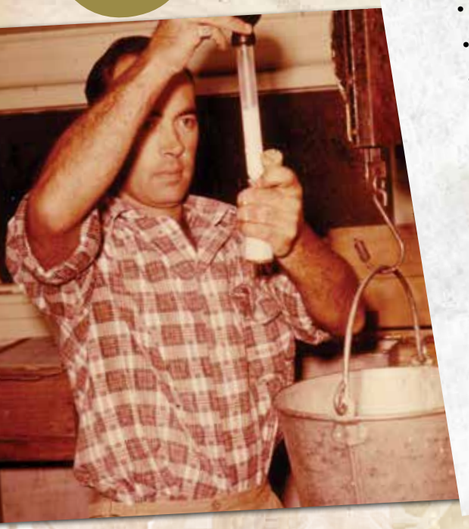
New improved semen diluents were also introduced under the guidance of Dr Patrick Shannon.

Measurement and analysis

The 10 years to 1970 saw the introduction of a number of innovations :

- Production Ranking Test (PRT) of two tests per year (1963)
- Cow census survey (1964)
- IBM computer installed to process AB records (1966)
- Milk meters replace test buckets (1967)
- Herd test ranking index (1968)
- Frozen semen storage changed from dry ice to liquid nitrogen as a medium
- All herd testing transferred to computer for processing (1969)
- Estimated Genetic Values (EGV) introduced for bull proofs with all cow herd mates used in the comparison
- Herd Improvement Department renamed the NZ Dairy Board Farm Production Division (1970)

In 1970/71, 716,000 cows or 32% of the total milking cows were under herd test, with 961,000 cows or 43% artificially bred.



Old Herd Testing method 1966/67 Tuhikaramea

Brian Ankers Herd Tester, 1966-68

Brian Ankers immigrated to New Zealand in August 1966 after being accepted for a herd testing position advertised in the Farmers' Weekly.

He had been the head herdsman for a farm back in England, so was already familiar with herd testing before arriving in New Zealand.

"Herd testing in England was the same as in New Zealand, with the same bottles and tests, although in England they sent their tests away to the local dairy, whereas I did all mine on the spot in New Zealand.

"I started work after being in New Zealand for about three days. I landed in Wellington and then came up on the train to Hamilton where I was taken out to a farm to meet the previous Herd Tester who was leaving. He stayed with me for a few days to get me into the business.

"I had a Landrover shipped over from England and that was a terrific help because the price of cars here was terrible at the time, and Herd Testers had to supply their own cars."

In 1967, his second year of Herd Testing, Brian used milk meters for the first time, introduced to improve accuracy. The previous season he had used the traditional milk buckets, so was in a good position to compare the two systems.

> "The milk meters proved to be very accurate and easy to use because you could write numbers on the flasks with a black pencil, then rub them out and start again when you were finished with them."

Brian Ankers with first Herd Testing meters 1967/68 Tuhikaramea

1960

1960 Sire Proving Scheme introduced

1960 496,000 or 26% of milking cows artificially inseminated with average 62.3% conception rate

1966

1966 Computers used for the first time to process artificial breeding (AB) records

1967

1967 Milk meters replace test buckets

Liquid nitrogen used to store semen (instead of dry ice)

1969

1969 Herd test processing computerised

Richard Fisher
Herd Tester, 1957-1960s

"On main roads there were three wheel marks, but on country roads everyone drove in the middle of the road, leaving just two tracks.

"My horse was an old hand at the job and, try as I might to keep to the left side of the road, it would trot in the middle of the left wheel rut, forcing approaching traffic into the loose metal to pass.

"On the third day the horse automatically turned into the correct farm entrance. As there was heavy clay soil the track to the house was on a raised causeway. As usual the horse took the left wheel rut, one wheel of the cart now bumping down off the track causing a great clatter from the buckets and lids, the other wheel at the highest point in the centre.

"The noise made the horse panic and it broke into a gallop. All I could do was hang on for dear life to the seat, which was now tilted at a 40-degree angle. Fortunately there was a large level turning area in front of the house and I regained control.

"On explaining what had happened to the farmer, he laughed and said, 'I thought you were in a bit of a hurry'."

Glenys Moore (nee Taylor) and Cathy Ferguson (nee Gilbert) Herd Testers, 1960s

Glenys Taylor was only 17 when she was employed as a Herd Tester by the South Island Herd Improvement Association. A Christchurch girl, her mother cried for a week when she found out, but Glenys, who had friends on a farm, always wanted to be a land girl.

She trained at the Association's offices in Hereford Street in Christchurch in 1966 then was taken out to dairy farms at Halswell to practice. Her first run was near Invercargill and she can still remember the first farm she went to.

"I distinctly remember it was on the way to Bluff. It was a Dutch couple, and their mother and a brother were also there. They all spoke Dutch together. I didn't sleep that night. It was all so strange."

After the Southland run she was sent to the Taieri and met Cathy Gilbert, also from Christchurch, and the two became life-long friends.

Cathy herd tested on 25 farms in the Henley-Berwick area and Glenys was closer to Outram.

Both women can remember the stir when meters replaced buckets.

"It was chaotic for awhile, because of the new technology. A lot of farmers on the Taieri had done the same thing for years so it took time to accept the change."

But getting rid of the heavy test buckets wasn't the only thing that was changing. Electric fencing came in and farmers were given the opportunity to learn to artificially inseminate their own herds.

"One farmer in the area bought in lots of feed one year and that was unheard of. It was said he was 'only buying his milk'. It was a radical idea for the Taieri and herd testing really came into its own then because it proved the results of the extra feed."

Both girls were taken in by the community and of course, husbands were found – but not from the farms where they herd tested.

Glenys married Kevin Moore, whose family were sheep farming near Outram, before they switched to dairying, and Cathy married Neville Ferguson, a market gardener also near the town. Many of the farmers they had herd tested for during the years came to their weddings.

Marriage meant the end of herd testing for both with Glenys going back to it briefly once but found it hard to juggle with raising children.

Early meters in a cow shed on the Taieri.

Richard Fisher and his Bradford van 2 June '57

Christine Giddens Herd Tester, 1969-1970

Christine Giddens didn't want to come to New Zealand as 'a £10 Pom', so she saved and paid her own passage to New Zealand in 1969. However, she was sailing into the unknown – she had no job to go to and no source of income.

When she left Chester, in northwest England, Christine only had the offer of a bed in Tauranga; her decision to become a Herd Tester made en-route to New Zealand.

"I was in the bowels of the ship with about five other girls and one of them was the daughter of a New Zealand dairy farmer. It was she who suggested I become a Herd Tester. I didn't know what a Herd Tester was, but I didn't have a job so I said 'OK'.

"The young girl from Feilding helped me write a letter to the Wellington/Hawke's Bay Herd Testing Association and we posted it from the ship.

"That letter must have gone from Cape Town because by the time I arrived in Tauranga there was a letter from the Association waiting for me. I spent only two days in Tauranga before heading to Palmerston North.

"I arrived there with a trunk and no where to stay. I had an interview and got the job, then discovered I needed a New Zealand driving licence."

Christine says she barely knew how to drive and had never driven alone, but the next thing she knew she was taking an oral driving test.

"I passed and without having any practical driving test or experience was legally allowed to drive. I was really excited. I was young, had been given a van and was now being turned loose on New Zealand roads!

"I hit the road and saw the sights."

Christine was herd testing in Wellington/Hawke's Bay.

Hard Work for Women As Herd Testers

So you are 18 and looking for a job? You think you would like to be out of doors, travelling around and meeting people?

You can drive a car well, you are healthy, you like cows and getting up at 5 o'clock in the morning?

You are single now but you have a vague idea that one day you might like to be a farmer's wife—and you don't mind putting on weight?

"I was pretty inventive in those days and remember thinking that I could improve the way the van was packed. So I set about re-organising the contents, carefully placing all the heavy items on one side of the van – never thinking of the effect this would have on the vehicle's balance ... well I soon found out. A big gust of wind came along, lifted up the side of the van and tipped me over. All the little test tubes were broken and someone from Otaki had to travel all the way to me with relief supplies and to help right the van.

"Eventually, after a year, I tired of the early mornings and cow poo and yearned for my natural habitat, behind a desk.

"What remains is the memory of overwhelming kindness from the farmers I met – and their patience with my accent."

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Arthur Attfield Herd Tester, 1962-1967

"Looking back on it those herd testing years were good, not easy, days."

The Hauraki Plains community spirit extended well beyond customary courtesies when, in 1962, '£10 Pom' Arthur Attfield arrived fresh-faced in New Zealand a few days before his 21st birthday.

"I arrived in New Zealand on July 4 and knew nobody except those I travelled to New Zealand with, but the hospitality I enjoyed upon my arrival was incredible – just a few days after arriving I turned 21 and a farmer client put on a 21st for me.

"Farming families treated me like one of their own and the friendships formed during those years have spanned four generations."

Something else impressed Arthur Attfield on his arrival – Kiwi kids.

"What struck me was how healthy ALL the kids looked. They were sun tanned, had a healthy colour, were energetic, outdoor kids used to being physical and helping out in the cowshed. Their level of fitness and health contrasted with children back home (in the UK) who seemed unwell and lethargic."

Arthur became the President of the Herd Testing Association Union.

"I remember meetings where the cow-cockies sat on one side of the hall and Herd Testers on the other. I initially found the role quite nerve-wracking as I was used to working on big farming estates in Britain where the class system was very evident and structured – it took a while to get used to the fact that here there really was no class distinction and in New Zealand I didn't have to tip my hat to my superiors."

The memories remaining with Arthur of strong community, trust and friendship are lasting mementos of his years herd testing.

"At that time the community was bubbling, jobs were available and people were friendly and welcoming. I always got a comfortable bed for the night – the hospitality was really good and added another dimension to the job."

Grainger Brown Herd Tester, 1961-1967

Taranaki, Pat Bulman's herd crossing Kaupokonui River

Herd Testing equipment

"It was a cold night, made even colder by the fact the hostel bed sheets hadn't been dried before going on the beds."

Originally from Scotland, Grainger Brown was unhappily selling dairy detergents in Cornwall in 1961 when he responded to a Farmers' Weekly advertisement recruiting Herd Testers to New Zealand.

Following a successful interview in London, Grainger found himself on the Canberra's maiden voyage to Auckland with 23 other Herd Testers.

They arrived in July 1961 – the middle of winter – and spent their first night at the immigration hostel in Mangere, South Auckland.

"It was a cold night, made even colder by the fact the hostel bed sheets hadn't been dried before going on the beds."

He and the other new recruits were put on a train to New Plymouth where they spent one month training at the Livestock Improvement office before being split up and posted to different parts of New Zealand.

Grainger remained in Kaponga, Taranaki and was given one of the biggest groups at the time – one herd with more than 240 cows.

"I was given two-days' pay for herds with over 140 cows, and four days' pay for herds with over 180 cows – although another Herd Tester would sometimes help out and we would split the pay."

Grainger and fellow Herd Tester, Tony Paul, were working on Tommy Gibson's Manaia Road dairy farm when heavy rain caused a river to flood.

"Normally this wouldn't have affected things as Tommy's farm had a bridge to cross the river.

"However, a neighbour without a bridge asked if he could use Tommy's one to get his cows to the side where his dairy shed was located.

"Tommy obliged, but because the neighbour's cows had never walked on a bridge before they balked when they approached it, running back in the direction they'd come from.

"The two farmers came up with the solution of mixing their herds together, which worked well until the 600 cows had to be drafted out again at the other end.

"It took all of us the rest of the day to sort them out, making for a very late herd test."

After four years of herd testing, Grainger had earned enough money to go travelling. He caught a ship to San Francisco in 1965 and met his future wife, Hazel, on the journey.

They married in 1966 and moved back to New Zealand, where Grainger herd tested for another year before going sharemilking.

"It was easy to get into sharemilking from herd testing because we were in regular contact with farmers and quickly found out when sharemilking positions came up."

1960

1960 Sire Proving Scheme introduced

1960 496,000 or 26% of milking cows artificially inseminated with average 62.3% conception rate

1966

1966 Computers used for the first time to process artificial breeding (AB) records

1967

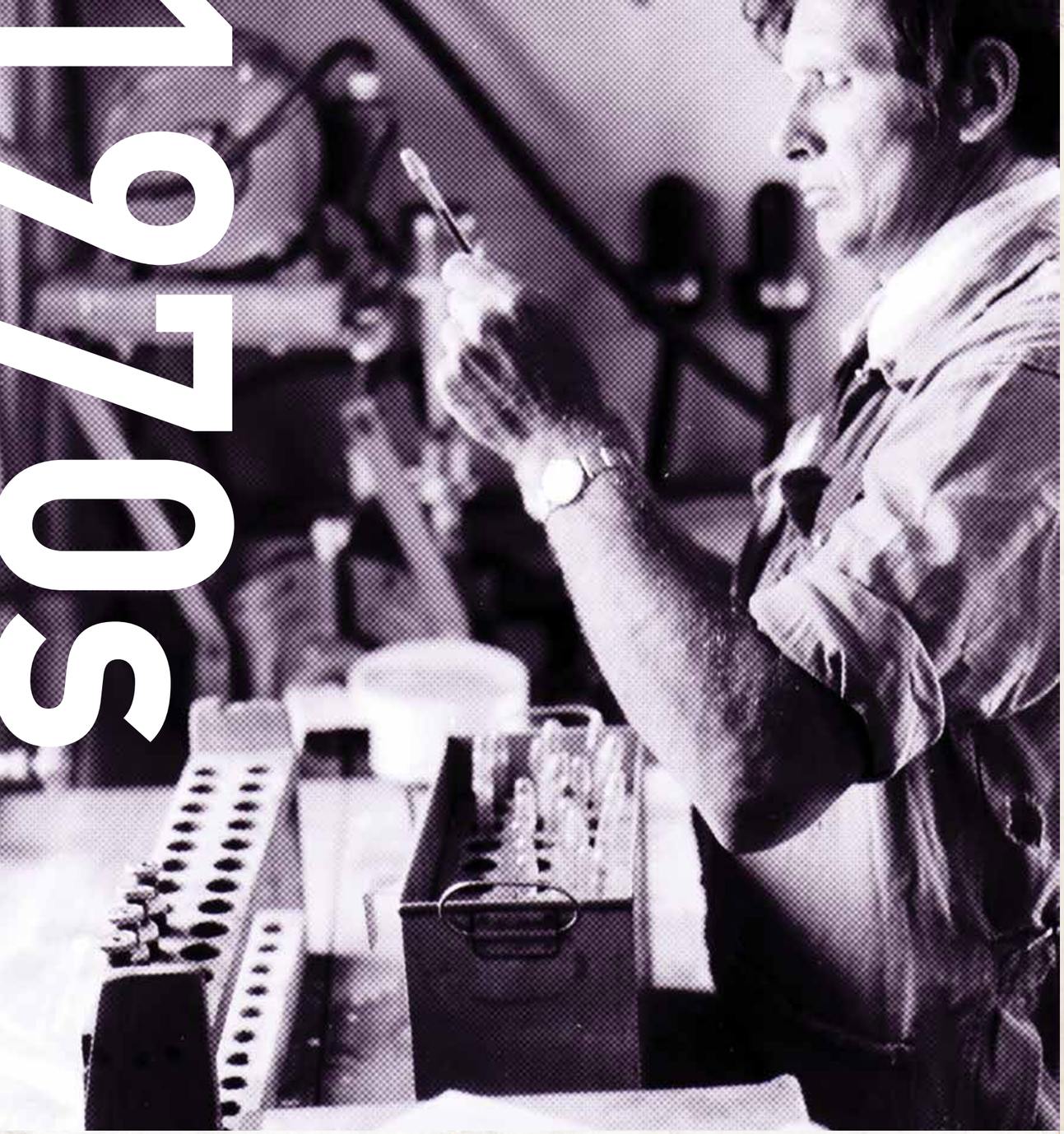
1967 Milk meters replace test buckets

Liquid nitrogen used to store semen (instead of dry ice)

1969

1969 Herd test processing computerised

1970s



Artificial breeding

Non-pedigree bulls were used for the first time in the Sire Proving Scheme in 1971.

In 1974 Breeding Indexes (BIs) replaced Ratings in Sire Surveys and Production Indexes (PIs) replaced Difference from Expected Level of Production (ELP). The metric system was introduced as was a Contract Mating Scheme to breed bulls for the Sire Proving Scheme.

Self-sample herd testing

Self-sample herd testing was offered for the first time, and as this required the testing of milk samples off the farm in regional testing laboratories, it enabled the introduction of a somatic cell counting service.

New Zealand Federation of Livestock Improvement Associations

Attempts were made to amalgamate the activities of the Dairy Board's Farm Production Division and the six Herd Improvement Associations, which had by this stage been renamed the Livestock Improvement Associations. The proposal was unsuccessful. However, by 1975 agreement had been reached with the six Livestock Improvement Associations (LIAs) to federate under a body named The New Zealand Federation of Livestock Improvement Associations.

DIY AB insemination

The same year saw the introduction of a Do-It-Yourself (DIY) AB insemination trial by the Wellington/Hawke's Bay Livestock Improvement Association.

Due to improvements in semen technology, for the first time more than 100,000 inseminations from a single sire were carried out during the spring.

1971

1971 Non-pedigree bulls used for the first time in Sire Proving Scheme

1974

1974 Breeding and Production Indexes replace Ratings in Sire Surveys

1974 Self-sample herd testing introduced

Somatic Cell Count (SCC) introduced

1975

1975 Federation of Livestock Improvement Associations formed

1975 Do-it-yourself (DIY) artificial insemination introduced

1975 A record 100,000 inseminations conducted in one season

Bill Cork Herd Tester, 1951-1979

"I came to New Zealand from England in 1951. There were shiploads coming over. I nearly went to Zimbabwe because I knew a chap who was farming over there, but I happened to read about New Zealand in a farming paper, so I came here instead.

"There were 1000 passengers on the ship coming into Wellington. I had to go to Edgecumbe, which I'd never heard of. At 7pm I caught the train to Hamilton. In Paikakariki it stopped for tea. The whistle blew to signal everyone back onboard, but no one got on the train. It left and I wondered what I would do, but then it came back again.

"I got to Hamilton, and then caught a bus to Rotorua, and then another to the factory in Edgecumbe. It was raining, the roads weren't tarsealed – they were shocking. Some of us went to the pub, but it didn't have any beer. We all decided that if we could get on a train and go home, we would.

"We learnt what we had to do in the factory and others joined us.

"The weather cleared up and it didn't rain again until after Christmas. I made friends with a guy called Ernie and we went camping over the summer. A farmer lent me his van and tent and gave me a great big hunk of pork. We went camping at Mount Maunganui, in exchange for milking the farmer's cows for a couple of weeks at the end of summer. He thought it was a great deal because he'd never had a summer holiday.

"Money wasn't much, but we didn't spend much – just clothes if they got holes in them. Money didn't matter; you didn't need it living on the farms.

"I began work as a Herd Tester in 1951 and continued for 28 years, right through to 1979.

> "Herds ranged in size from about 30 to 200. A farmer would make a good living on 50 cows, and still be able to go to the races and enjoy a good life".

"I never missed a day's work, except for the time I caught Leptospirosis off some calves.

Bill Cork's horse Dolly with Max Moms

I felt buggered and went to bed for a couple of days, but when I rang the office and said they'd better find someone else to do my work, they said they didn't have anyone.

"I went to the doctor and he said, 'I think I know what you've got – don't work', but I kept on.

"Some people had it pretty bad. We used to tattoo calves' ears and rub boot polish in to stain them. There was a certain amount of blood, so the farmer and his kids all got Leptospirosis too.

"I used the Babcock method to spin milk in a centrifuge. I had an electric one, but a farmer's son modified it so that if the power went out, I could fix a handle to it and keep it running. I don't think the power ever went.

"Herds ranged in size from about 30 to 200. A farmer would make a good living on 50 cows, and still be able to go to the races and enjoy a good life.

"Most sheds were walk-through with between four and eight bales. We used four gallon steel buckets and coupled them up to the farmer's machine.

"Then the herringbones came and I was getting a bit older, so didn't want to carry buckets up and down steps – too easy to slip. I'd had enough of carrying buckets and asked for milk meters instead. I got those in 1959 and they made life a bit easier. I only needed a small sample rather than a four-gallon bucket.

"We'd finish herd testing early in May and then I'd have June off and work again in July – just four to five herds around town.

"It was still like a holiday – I'd work a few days and get paid for the whole month. It was like catching up with friends once a year. I'd live with farmers over the winter and look after the cows while they had a holiday.

"I'd help out around the farms I stayed at. One year I helped a farmer build a piggery, another year it was a cowshed, another year we built a front room on the house, and another year we built a bathroom with shower and toilet on the back of the house. I liked staying there because his wife was a good cook – the farmer's wives were all pretty good cooks and made me feel welcome.

"I'd usually get the guest room. When I got to the farm, I used to take my suitcase to my room and chuck it inside, before going to the cowshed to fix up my gear.

"I went to do this one day and there was a lovely girl on my bed. I chucked my bag on her. She was nice too – we went to Maketu for a swim.

"I didn't have a house then. I worked 20 days a month and on my days off I would stay with a farmer and do the gardens and what not. They'd make use of me."

Allie Thompson (Alison van Wering) Herd Tester, 1969 to 1974

"I wanted to be a herd tester when I left school but couldn't apply until I was 19, so I went land-girling for three years.

"I applied in 1969, got in and was sent to the Cheese Factory in Matamata for training. We worked from there until we got offered a group somewhere and chose to take it. Milk meters had just come in - thank goodness, those buckets were heavy.

"The Auckland Herd Improvement Association, who I worked for, financed me into a car – I only had a motorbike until that point. It was a Mark 2 Zephyr which had been an AA patrol car. I towed a trailer with all the gear required to test the milk which included a huge spinning machine that you cranked up with a handle once all the samples were put in it. This separated the butterfat portion of the milk.

"We used to stay on farms and I remember the farmers would give us a packed lunch for the day after testing – or money to buy it.

I was a Herd Tester for five years and thoroughly enjoyed it, three seasons in the Waikato and two in the Bay of Plenty. Farmers used to comment that it was nice to have the same person back again each season, as being a seasonal job, the testers came and went with regularity.

"The standard of accommodation varied. I remember walking into my bedroom at one farm to feel something crawling on my legs – fleas, lots of them. I slept outside in the Zephyr. And that wasn't the only night that I slept in the car; there were times when the beds were so damp you'd swear they'd been doused with a hose! But those were rare occasions, in the main the farmers' hospitality was wonderful."

Allie stopped herd testing when she got married but returned to LIC in 1994 working for various periods of time in the milk analysis laboratory, weigh station and office. She is now an LIC District Manager based in the Northern Waikato.

Allie Thompson (Right) "sitting on my Anglia van,which was the first vehicle I had before the Mark 2 and trailer"

Jeanette Mahan Herd Tester, 1966-2009

Jeanette Mahan is a well-known face and personality to generations of farmers in South Canterbury. Starting as a Herd Tester in 1966, she's still at it today.

"These days I mainly drive the truck, but from 1966 to the early 1990s I would travel to a farm, stay the night and herd test the next morning."

According to many of her herd test clients, Jeanette's arrival was a highlight of each month, with children eagerly awaiting her arrival.

"The kids would look forward to you visiting, they'd get really excited. They would put thistles in my bed and apple pie it; once I discovered this there'd be huge play-fights."

Jeanette admits to being disappointed when the sleepovers stopped in the early 1990s. However she still keeps in contact with her clients and ex-clients and often gets in trouble when visiting areas if she visits one, and not the other.

"I went and saw one of them the other day and even after all these years they served me my favourite for lunch, macaroni cheese."

"I've herd tested for farmers who I first met when they were children - that's been an added pleasure, being generational."

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Somatic Cell Count (SCC) introduced

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Left to right: Pat Penrose, Bob and Kath Johnston, Jack Baird, Daph Parkins

Love in herd testing

Pat Penrose, Kath and Bob Johnston, Jack Baird and Daphne Parkins Herd Testers, 1950-1980s

Pat, Kath, Bob, Jack and Daphne were attracted to the herd testing profession at different points in their lives and, along the way, fell in love, learnt to drive, and forged lifelong friendships.

They all worked at/for the South Island Herd Improvement Association at some point in their herd testing careers.

A Herd Testers Reunion is held every year on Waitangi day where all the ex-Herd Testers get together followed by a post-reunion brochure. Ex-testers come from Whangarei to Te Waewae and range from testing in the 1930s through to the 1980s with some who are still involved in herd testing (like Jeanette Mahon).

The size of the herds tested by the group ranged from three to 100 cows and they recall that herd testing was seen as a very "glamorous job but a lot pulled out after the first week when they realised that it also involved a lot of hard work" Pat said.

The main reason to herd test in the early years was "culling and good records if you were breeding," Daph recalls.

The women in the group say that herd test trucks had their speeds limited to 30 miles per hour and "it always paid to carry a nylon stocking in case the fan-belt broke!"

Pat Penrose 1959 - 1963
Met and married Ivan, who started off as a Herd Tester and went on to be involved in herd testing for 36 years.

Kath Johnston 1950s – 1960s
Met and married Bob Johnston a Herd Tester who became General Manager for the South Island Herd Improvement Association.

Bob Johnston 1948 – 1980
"Herd testing was a great way for a farmer's son to find a mate for life."

Jack Baird 1952 – 1960s
Met and subsequently married Jenny Baird, one of the "giggly girls" in the office and also a Herd Tester.

Daph Parkins 1953 – 1963
"I saw a woman doing a herd test one day and thought that looks like a pretty good job."

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1980s

The Farm Production Division relocated from Wellington to the Newstead AB Centre property where it was joined by the Auckland LIA and the New Zealand Federation of LIAs, both previously based in Central Hamilton.

922,000 cows, or 45% of the national herd were herd tested and 1,102,634 or 54% of all cows artificially bred.

A new database to service the needs of the Farm Production Division, the LIA and Breed Societies was now under development.

Amalgamation

Following a study of North American Herd Improvement operations and Land Grant Universities by the Chairmen and Managers of the six Livestock Improvement Associations and the Farm Production Division, the group proposed to the NZ Dairy Board that a study be undertaken of the future structure and services required to undertake dairy herd improvement and farm management.

The Board appointed a Committee under the chairmanship of Dr Alan Frampton and, following an extensive study including submissions from approximately 80 interested parties, the Committee's report in 1983 concluded "that a single organisational structure should be established to administer the future operations of dairy herd improvement and farm management for the industry."

Following further consultation and negotiation, a Deed of Establishment was signed in August 1984 by the Dairy Board and the six LIAs agreeing to operate as a single structure, even though they were still seven separate legal entities. The new structure was called the Livestock Improvement Division of the NZ Dairy Board. The activities of the New Zealand Federation of the LIAs were taken over by the Livestock Improvement Division and the Federation was wound up.

The Herd Improvement Council was renamed the Livestock Improvement Council, comprising eight representatives from the LIA and two from the NZ Dairy Board. The LIA Committees became Regional Boards of the Council.

Herd testing under the Livestock Improvement Division became a full national service resulting in significant cost reduction, uniformity and consistency.

The National Milk Analysis Centre (NMAC) was established, testing all herd testing milk samples for the country on a 24 hour/day basis. Residual samples were also available for testing for research and herd and cow health.

Database

Planning for the development of the new database commenced in 1979 with the new system coming on line in 1985 after one of the largest tasks ever undertaken by the Livestock Improvement Division.

MINDA

One of the most significant new systems developed and introduced as a consequence of the database was the Management Information for Dairy Animals (MINDA) system.

MINDA provided a unique lifetime identification of dairy animals verifying ancestry and parentage for current and future herd members. For the first time animals, when sold, could be traced throughout their lifetime irrespective of location. Genetic abnormalities and disease along with animal health status could be monitored, as could genetic progress and trends.

The comprehensive information facilitated research into genetically inherited traits and significantly enhanced the accuracy of the animal evaluation model and it's underlying research.

In conjunction with Livestock Improvement's decision to provide all farmers with unique identification tags for all calves born, MINDA earned its place as one of the most important industry strategies ever developed.

The same year the effect of AB on production per cow was measured from a base year of 1955. AB bred stock had increased production by 32.8 kg of milkfat per cow whereas non-AB animals had only increased by 20.7 kg.

Rationalisation

In 1988, following farmer meetings around the country, a decision was made to wind-up the six Livestock Improvement Associations as legal entities and transfer the assets to the NZ Dairy Board. The Board then transferred those assets, together with the assets of the Farm Production Division, to a new company, the Livestock Improvement Corporation, a wholly owned subsidiary of the Dairy Board which the Board owned in trust on behalf of current and future users of the services.

This was a further move in the rationalisation which began in 1939 with the amalgamation of the 28 Herd Testing Associations into six Herd Improvement Associations. The six Regional Boards of Directors were, however, retained to operate as the Livestock Improvement Corporation's distributed representative network. In 1998 the Regional Boards were disbanded, replaced by a National Council and a Liaison Farmer network. The Liaison Farmer network was active with the National Council during the Dairy Industry review in 2000/01 but membership declined and in 2005 the network was replaced by an annual farmer forum. The National Council was renamed the LIC Shareholder Council in 2007.

1989 saw the introduction of the Animal Register to enhance the speed and accuracy of data transfer from farm to database.

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1,102,634 or 54% cows AB

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1981 New herd improvement database under production

1984

1983 Frampton Committee recommends formation of single integrated herd improvement organisation

1985

1984 Livestock Improvement Division of NZ Dairy Board formed

1985 Livestock Improvement Database operational

1988

1985 MINDA (Management Information for Dairy Animals) launched

1988 Livestock Improvement Corporation Limited formed.

Len and Gwen Scott Farmers, 1940s to late 1990s

Len Scott's first recollections of herd testing are on his father's farm in Taranaki during the 1940s, and then later when he and wife Gwen farmed in Kapuni from the 1950s through to the late 1990s.

Len's dad was on the Dairy Board during the war years (1941-1945) and Len studied a Diploma in Agricultural Science – Dairying Option.

"Even pre-herd testing Dad would want to know if he had a good cow and would dry off a cow early if she was not producing. However, he didn't know individual percentages of milk fat or the volume of milk butter fat.

"I remember the horse and cart carried all the testing buckets during the war years and then later, during the 1950s.

"Most Herd Testers were young Poms and all those I knew eventually met and married New Zealand girls and played their part as wonderful citizens – the selection process must have been pretty sound."

Len has milked in most types of dairy sheds – a walk-through during the 1930s and a herringbone in the 1950s, he recalls the introduction of milk meters in the 1970s and was one of the first farmers to build a rotary milking platform – 22-bales in the 1970s and 60-bales in 1982.

"The whole process of milking got faster over the years, especially from the old walk-throughs to herringbones. This meant the method of milk sampling also needed modernising, as it was almost impossible for the farm workers and the Herd Tester (with test buckets) to work together in such confined areas and keep up with the speed of milking.

"With the milk flow meters cows didn't worry about the testing and there was never any disputes about the milk. The milk was measured using the Babcock Test, which measured the fat content of milk and herd testing used the Gerber testing equipment.

"During herd testing you needed to add a labour unit in the shed and having Herd Testers did sometimes put a strain on home circumstances, as help was needed in the dairy and you also had a visitor staying over night who needed to be catered for.

"Before the introduction of plastic ear tags, things could get quite confusing and funny for the Herd Tester. All our cows had names, there were no numbers or ear tags and most of our animals were pets – you could go into the paddock and they'd come to you.

"Without herd testing it was harder to make culling decisions, particularly as the cows were more like pets, but that is why we herd tested, because those decisions had to be made."

Above: Walk-through shed

Alan Pryce
Herd Tester, 1972-2009

Alan Pryce is a Herd Test Field Technician for LIC, and has clocked up nearly four decades of working in Taranaki dairy sheds.

Alan says he has loved his job since the day he started.

On a "typical" day Alan says he gets up at about "five-ish" and has then generally finished the morning shift by 10am.

"After I've washed-up, packed-up and taken the trays to the depot, it's usually breakfast time and then until the afternoon I have the best part of the day to enjoy.

"I'll only stop doing this job when I can't keep up. Until then, and while they still want me, I'll carry on."

Alan says he has loved his job since the day he started.

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The new database to service the needs of the Farm Production Division.

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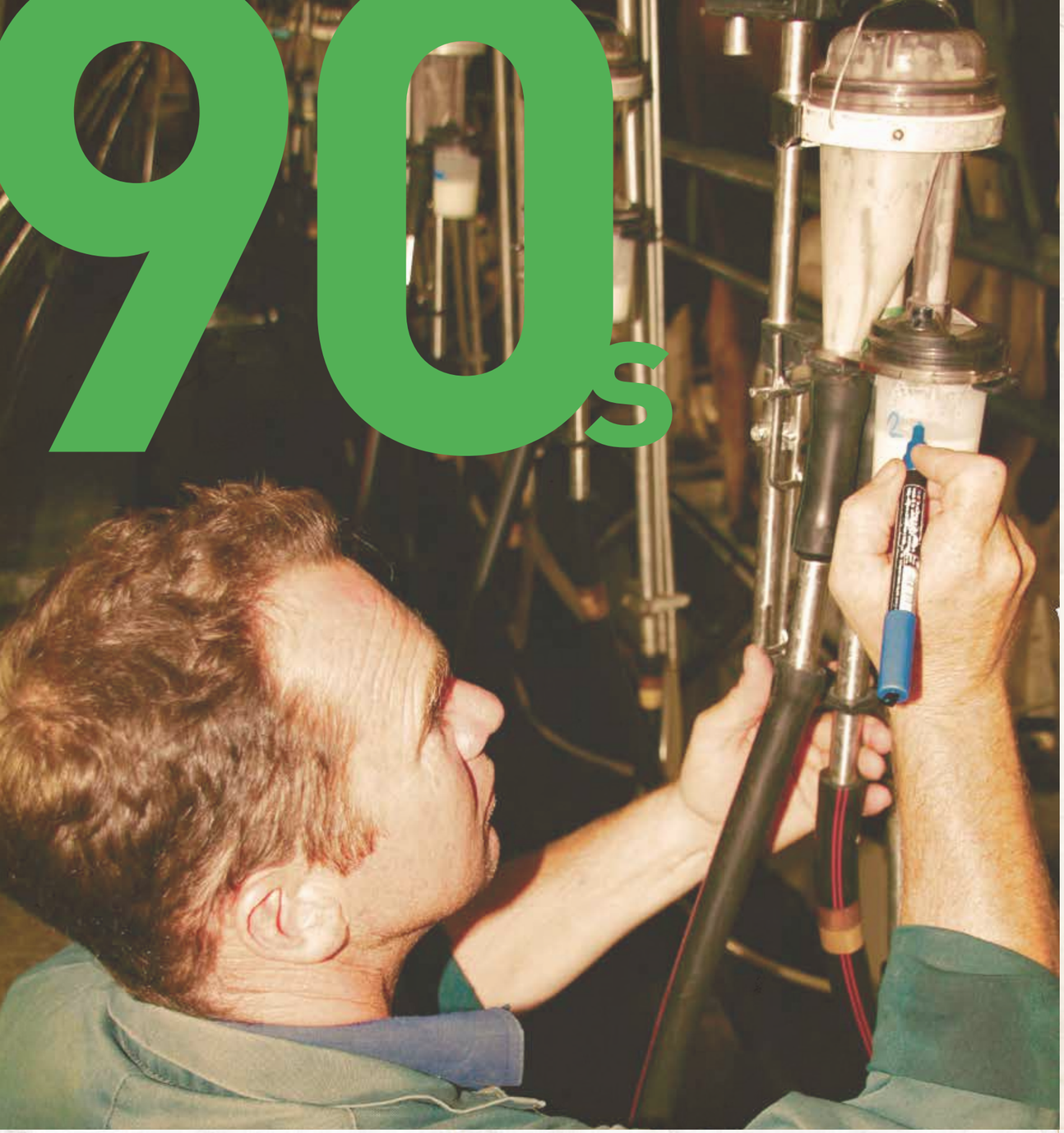
90s



By 1990 the number of cows under herd test had increased to 1.6 million, 69% of cows in milk, while AB had risen to 1.7 million cows inseminated, or 79% of cows in milk.

1991 saw the introduction of Animal Transfer Certificates and, in association with Massey University, the launch of the first DairyMAN personal computer programmes for farmers' use.

Macdonald Committee

As a consequence of two unsuccessful attempts to secure a licence to herd test in competition with the Livestock Improvement Corporation (LIC), the Dairy Board appointed the Macdonald Committee to review herd testing and related matters. The Macdonald Committee, which consulted widely within the industry and with Government, published its findings in 1992.

The key findings were that

- In order to serve the best interests of the New Zealand economy and all dairy farmers in the country, genetic gain must be optimised;
- LIC, owned by the NZ Dairy Board and controlled by the users of its services, should continue to own, manage and control the national database;
- Herd testing should remain a regulated activity under a licensing authority;
- A Tribunal should be appointed to mediate between LIC and potential users of data from the national database. The Dairy Herd Improvement Tribunal was subsequently appointed by the Dairy Board and its Terms of Reference and the Access Code gazetted.

Across-breed Animal Evaluation

1996 saw the introduction of a new Animal Evaluation System which, for the first time, compared animals across breed and on net profit rather than gross output. This required measuring or estimating the weight of cows in order to determine feed maintenance requirements.

1990

1990 1.6 million or 69% of cows under herd test, 1.7 million, or 79% of cows, AB

1992

1992 Macdonald Committee recommends Livestock Improvement continue to manage and control national database

1996

1996 Across-breed animal evaluation introduced

Marlene Balsom Herd Tester, 1965-2009

Marlene Balsom's name is synonymous with herd testing. She was a linchpin to LIC's Taranaki herd recording and herd testing business for 44 years and now works for the company as a MINDA Specialist, helping many farmers keep their records up-to-date and train them in electronic MINDA and FarmKeeper programmes, as well as looking after the hobby herds.

"I'm a fourth generation Balsom, all of whom have been dairy farmers on Mangorei Road in New Plymouth and I still live on a farm first settled by my great-grandparents."

Marlene came to LIC straight from school, recalling that her first job involved calculating the volumes from the evening and morning milkings to generate a total yield, and double-checking that against the total entered by the Herd Tester.

Back then, the Taranaki region had a reputation for being one of the highest users of herd testing in the country. Monthly tests were common, 200 cows was a large herd and all cows had names. Marlene can recall typing in those names, along with the breed, age and herd book numbers (if they were pedigree) onto herd test sheets in preparation for monthly herd tests.

Herd recording, then, was regional with Marlene running herd records for herd testing, AB and calf identification.

In the early 1980s the manual system was updated when computers arrived and talks began about developing a national database of dairy cow information. It was a radical, ambitious plan and Marlene, as a devotee of herd recording, was on the Committee which developed the look and feel of the eventual database.

She exhibits obvious pride in contributing to the integrity for which the LIC Database has won renown – "nothing was, or is – entered without verification; the standards of accuracy are the highest possible and there's simply no room for error."

Thinking back to the manual systems she inherited when she joined herd improvement, Marlene muses that her farmers "wouldn't have guessed at the technology or information which'd be available to them. Today farmers have an incredible variety of information which helps them make management decisions every day."

Marlene is part of the fabric of dairying in Taranaki, many of the records the region is renown for, testament to her dedication and attention to detail. She is as much part of the fabric of LIC.

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2000s

Dairy Industry Restructuring Act 2001

During the 1990s and into the new century, the dairy industry and the Government considered its future structure. Dairy companies had amalgamated to a point that there were only a small number of key milk processors – New Zealand Dairy Group, Kiwi Co-operative, Tatua and Westland.

The Dairy Board issued share capital to the dairy companies in proportion to production and, in December 2001, the New Zealand Dairy Group and Kiwi Dairy Co amalgamated to form Fonterra.

The legislation which enabled this amalgamation, the Dairy Industry Restructuring Act 2001, also returned ownership of Livestock Improvement from NZ Dairy Board, which had held it in trust, to its farmer users.

The Dairy Industry Restructuring Act 2001 also recognised that the database had two distinct sections – raw data (from herd testing) which would in future be known as the Core Database, overseen by an independent Access Panel appointed by the Minister of Agriculture and value added data which was the domain of LIC and which would be known as the LIC Database.

The Act also, for the first time, opened the way for competition in herd testing, all certified Herd Testers having to store raw data on the Core Database. Hamilton based breeding company, Ambreed, was subsequently granted certification to herd test.

Dairy Statistics

The Dairy Statistics for the 2007/2008 season shows a total cow population of 4.013 million which produced 1.27 billion kilograms of milksolids. There were 11,436 herds. The average herd size had doubled in 20 years to a new average of 351 cows. Average per cow production was 307 kg milksolids, comprising 175 kg milkfat and 132 kg protein.

The vast majority of dairy herds (79%) are located in the North Island, with the greatest concentration (32%) situated in the South Auckland region. Taranaki, with 16% of dairy herds, is the next most heavily populated region. South Island dairy herds account for 21% of the national total, but have 31% of the cows.

Around 74% of herds undertake herd testing and around 75% or 3.017 million cows and 169,000 yearlings are artificially mated.

In addition, around 98% of all animals born and retained as dairy replacements were identified at birth and the details recorded on the Livestock Improvement Database through the MINDA system. These figures are among the highest in the world.

Four out of every five dairy cows in New Zealand are sired by a LIC bull, the Premier Sires team contributing more than $16 billion to the New Zealand economy since AB began in the 1950s, in excess of $30 million per year.

2001

2001 Dairy Industry Restructuring Act 2001 – LIC becomes a farmer owned co-operative

2001 New providers of herd testing

2008 Total cow population of 4.013 million; 74% of herds herd test and 75% utilise artificial breeding

2008

2009 Dairy Industry Statistics for 2007/2008 season

Four out of every five cows in New Zealand sired by a LIC bull

2009

2009 Premier Sires team contributes $30 million to New Zealand economy each year a total of $16 billion since AB began in the 1950s

Nelson Cook Farmer

"My mother, Jean, used to help the herd tester who called at the family farm, by converting cow names to numbers, so herd testing was part of my childhood, and has been something I've done throughout my farming career.

When I started (farming) 40 cows was the average farm, and was considered the number that one person could manage. Today farmers are expected to manage 250 cows.

The margins over the years have got smaller and smaller, and the numbers have got bigger and bigger.

We have always believed that you feed the same amount of feed to a poor cow, as a good one, so it's absolutely essential to only farm the good ones.

"I've always believed that farmers should concentrate on the job they normally do and let somebody else look after the samples, it's too easy to make mistakes. The information is too valuable if you make a mistake."

Herd testing in 2009

Today farmers are able to choose whether to test once, or twice, in a 24 hour period.

Gone, too, are the days when farmers have to pair milk samples in the farm dairy – EZ Link, an electronic hand-held electronic device, scans the barcode on the milk flask, linking this to the cow which produced the sample, and the information downloads directly to the LIC Database and the farmer's records.

Average turn-around-time – from sample collection to receipt of milk analysis – is usually between two to four days.

In 2009, the raw data collected during herd testing is returned to farmers with value-added through a wide range of tailor-made farm management reports enabling them to make knowledgeable decisions as and when they are needed. Reports can be accessed on paper, from the home computer or an electronic device in the back pocket.

Gayel Berghan First recipient of National Certificate in Dairy Farming (Herd testing) Level 3

LIC Northland's Herd Testing Team Leader, Gayel, is the first person in New Zealand to achieve the National Certificate in Dairy Farming (Herd Testing) Level 3.

The National Certificate in Dairy Farming (Herd Testing), developed by LIC in conjunction with the AgITO, was introduced in 2006 and covers planning, preparation for and carrying out of herd testing, inspecting and calibrating milk meters and understanding herd testing equipment. It also teaches about farm dairy layout, design and hazards, farm dairy equipment and safety in the workplace.

Gayel was among the first intake to the course, along with 25 others. Of the 11 papers, she completed eight compulsory papers over a period of two years and was able to cross-credit some previously earned relevant credits.

"It took two years and was a lot of work, but everything complemented what I do every day on the job, and it's pretty cool to be the first person in the country to get this qualification," she says.

"I knew when I started the course two years ago I would be one of the first in New Zealand to get this qualification, but I didn't think I would be THE first."

"Completing the qualification was a challenge," she says. "But in my mind it needs to be challenging, or it's not worth achieving – and I was determined to do well."

2001

2001 Dairy Industry Restructuring Act 2001 – LIC becomes a farmer owned co-operative

2001 New providers of herd testing

2008 Total cow population of 4.013 million; 74% of herds herd test and 75% utilise artificial breeding

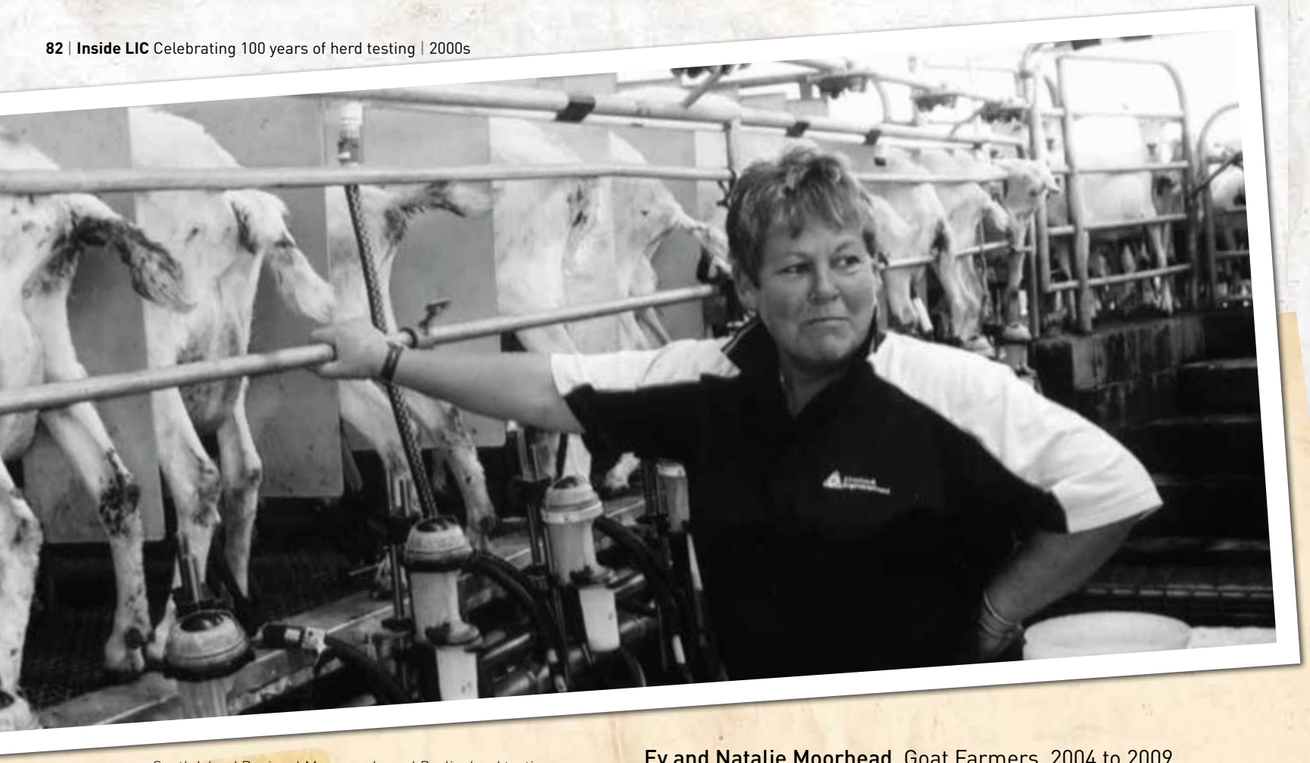
2008

2009 Dairy Industry Statistics for 2007/2008 season

Four out of every five cows in New Zealand sired by a LIC bull

2009

2009 Premier Sires team contributes $30 million to New Zealand economy each year a total of $16 billion since AB began in the 1950s



South Island Regional Manager, Laurel Devlin, herd testing

Ev and Natalie Moorhead Goat Farmers, 2004 to 2009

New Zealand has a growing number of goat herds, a number of whom herd test.

Ev and Natalie Moorhead milk 250 goats through a purpose built 12 aside herringbone shed which has double the number of cups to a normal dairy, so they can milk 24 goats at once, taking about two hours.

"We milk twice a day, during peak season until mid-January when the volume drops and we switch to once-a-day.

"Previously our breeding programme involved carrying through every female but we've now reached a point where we can start selecting based on production and herd testing helps us do that.

"Milking goats is very different to cows, they're all fed in the bales so they're very keen to get into the shed. There's no need for a dog, they run in.

"And they have such prominent personalities, with a pat or scratch required for some before milking. They're just extremely inquisitive and a lot more interactive with you in the shed than cows are."

The major difference for Herd Testers is the positioning of the meters which are at waist, instead of shoulder, height and little or "no poo-splatter to work around."

Then (1960s) to present day

74 London Street, Hamilton - once the offices of the Auckland Herd Improvement Association but now home to a very different kind of business.

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Jean Caie Herd Tester, 2005-2009

Jean is the modern face of herd testing, based at LIC's depot in Morrinsville.

"I grew up on my parents' dairy farm near Matamata, so dairying's in my blood. I became a Herd Tester in 2005 and work for around nine months of the year.

"It's great, I get to enjoy the beautiful Waikato countryside as I drive from farm to farm and get to meet and provide an important service for lots of different dairy farmers."

In contrast with her predecessor Herd Testers, Jean conducts on average four herd tests for each farmer client each year.

"On a typical day I deliver sampling equipment which includes milk meters, numbered trays of collection flasks and rubber hoses to a varying number.

"At peak time (from the end of September to the beginning of October), I fit 130 - 150 milk meters and set up about five sheds a day.

"At milking time, as each cow is milked, milk passes through the meters and a small proportion is automatically metered and collected into the flask.

"A separate flask is used for each cow in the herd, and is clearly labeled. Farmers using LIC's Herd Testing service have a choice of recording cow number – either by writing the cow's number on the corresponding flask or through LIC's EZ Link handheld device which scans a barcode on the side of the flask so it is easy to identify which milk sample came from which cow."

After analysis, farmers receive a Herd Test Results Lab Strip and a full MINDA (herd record service) herd test report follows a few days later with a comprehensive analysis of the herd's performance.

"It's a far cry from the manual onfarm work Herd Testers used to have to do, but it's equally as important today as it was then."

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100 years of herd production from 1909-2009

	Total Cows Tested	Total Cows	Milkfat (Kg)	Total All Cows	Percent Cows Tested	Butterfat Production per Cow (Pounds)	Milkfat (Kg)	Milkfat Per Cow	All Cows in Milk	Percent Cows Tested
1909/10	815	583,163	67.3	583,163	0.1	148.5	67.3	259.8	583,163	0.1
1910/11	4,317	633,733	63.3	633,733	0.7	139.5	63.3	244.1	633,733	0.7
1911/12	13,440	655,503	63.5	655,503	2.1	140.1	63.5	245.2	655,503	2.1
1912/13	25,000	678,021	68.4	678,021	3.7	150.8	68.4	263.9	678,021	3.7
1913/14	25,000	701,312	71.0	701,312	3.6	156.5	71.0	273.9	701,312	3.6
1914/15	24,000	725,403	69.9	725,403	3.3	154.1	69.9	269.6	725,403	3.3
1915/16	24,105	750,323	72.8	750,323	3.2	160.5	72.8	280.9	750,323	3.2
1916/17	14,343	777,439	74.4	777,439	1.8	164.0	74.4	286.9	777,439	1.8
1917/18	26,768	793,212	69.1	793,212	3.4	152.2	69.1	266.4	793,212	3.4
1918/19	17,000	826,135	68.3	826,135	2.1	150.6	68.3	263.6	826,135	2.1
1919/20	25,134	903,454	69.0	903,454	2.8	152.0	69.0	266.1	903,454	2.8
1920/21	35,757	874,000	70.0	1,004,666	3.6	154.3	70.0	269.9	874,000	4.1
1921/22	45,564	998,000	79.4	1,137,055	4.0	175.0	79.4	306.2	998,000	4.6
1922/23	84,825	1,107,000	81.9	1,248,643	6.8	180.6	81.9	316.1	1,107,000	7.7
1923/24	151,214	1,168,000	79.0	1,312,588	11.5	174.1	79.0	304.7	1,168,000	12.9
1924/25	196,850	1,179,000	82.6	1,323,432	14.9	182.1	82.6	318.7	1,179,000	16.7
1925/26	169,776	1,162,000	81.4	1,303,856	13.0	179.4	81.4	314.0	1,162,000	14.6
1926/27	170,150	1,161,000	90.0	1,303,225	13.1	198.5	90.0	347.4	1,161,000	14.7
1927/28	224,130	1,222,000	88.6	1,352,398	16.6	195.4	88.6	341.9	1,222,000	18.3
1928/29	159,594	1,271,000	95.6	1,371,063	11.6	210.8	95.6	369.0	1,271,000	12.6
1929/30	283,731	1,369,000	98.9	1,440,321	19.7	218.1	98.9	381.6	1,369,000	20.7
1930/31	271,404	1,479,000	91.2	1,601,633	16.9	201.0	91.2	351.8	1,479,000	18.4
1931/32	259,857	1,562,000	90.6	1,702,070	15.3	199.7	90.6	349.5	1,562,000	16.6
1932/33	286,054	1,703,000	97.4	1,839,441	15.6	214.8	97.4	375.9	1,703,000	16.8
1933/34	300,511	1,796,000	99.8			220.0	99.8	385.0	1,796,000	16.7
1934/35	269,177	1,807,000	115.1			253.7	115.1		1,807,000	14.9
1935/36	247,965	1,803,000	117.3			258.7	117.3		1,803,000	13.8
1936/37	278,695	1,785,000	121.2			267.3	121.2		1,785,000	15.6
1937/38	273,867	1,743,000	117.8			259.7	117.8		1,743,000	15.7
1938/39	242,965	1,724,000	105.2			232.0	105.2		1,724,000	14.1
1939/40	228,769	1,719,000	119.0			262.3	119.0		1,719,000	13.3
1940/41	300,000	1,759,000	125.0			276.0	125.0		1,759,000	17.1
1941/42	310,000	1,757,000	117.0			256.6	117.0		1,757,000	17.6
1942/43	219,000	1,715,000	115.0			253.4	115.0		1,715,000	12.8
1943/44	228,000	1,648,000	115.0			253.8	115.0		1,648,000	13.8
1944/45	264,000	1,679,000	127.0			279.6	127.0		1,679,000	15.7
1945/46	291,000	1,662,000	106.0			233.8	106.0		1,662,000	17.5
1946/47	319,000	1,658,000	118.0			260.6	118.0		1,658,000	19.2
1947/48	342,000	1,714,000	117.0			258.2	117.0		1,714,000	20.0
1948/49	365,000	1,747,000	127.0			279.6	127.0		1,747,000	20.9
1949/50	424,000	1,850,000	124.0			273.5	124.0		1,850,000	22.9
1950/51	474,000	1,898,000	128.0			283.1	128.0		1,898,000	25.0
1951/52	473,000	1,906,000	129.0			285.1	129.0		1,906,000	24.8
1952/53	488,000	1,962,000	135.0			298.3	135.0		1,962,000	24.9
1953/54	515,000	1,999,000	123.0			271.0	123.0		1,999,000	25.8
1954/55	520,000	1,995,000	126.0			278.2	126.0		1,995,000	26.1
1955/56	481,000	1,996,000	132.0			291.4	132.0		1,996,000	24.1
1956/57	461,000	1,998,000	132.0			291.9	132.0		1,998,000	23.1
1957/58	500,000	1,967,000	142.0			313.5	142.0		1,967,000	25.4
1958/59	459,000	1,931,000	145.0			319.3	145.0		1,931,000	23.8

NZDB, 1924-34, 1934, p. 21

	Total Cows Tested	Total Cows	Milkfat (Kg)	Total All Cows	Percent Cows Tested	Butterfat Production per Cow (Pounds)	Milkfat (Kg)	Milkfat Per Cow	All Cows in Milk	Percent Cows Tested
1959/60	471,000	1,887,000	143.0			314.7	143.0		1,887,000	25.0
1960/61	499,000	1,929,000	141.0			311.5	141.0		1,929,000	25.9
1961/62	490,000	1,968,000	138.0			304.6	138.0		1,968,000	24.9
1962/63	453,000	1,997,000	139.0				139.0		1,997,000	22.7
1963/64	486,000	2,011,000	146.0				146.0		2,011,000	24.2
1964/65	531,000	2,032,000	151.0				151.0		2,032,000	26.1
1965/66	524,000	2,088,000	152.0				152.0		2,088,000	25.1
1966/67	503,000	2,131,000	150.0				150.0		2,131,000	23.6
1967/68	538,000	2,232,000	138.0				138.0		2,232,000	24.1
1968/69	602,000	2,304,000	143.0				143.0		2,304,000	26.1
1969/70	700,000	2,321,000	129.0				129.0		2,321,000	30.2
1970/71	716,000	2,239,000	134.0				134.0		2,239,000	32.0
1971/72	690,000	2,200,000	146.0				146.0		2,200,000	31.4
1972/73	772,000	2,190,000	139.0				139.0		2,190,000	35.3
1973/74	782,000	2,140,000	135.0				135.0		2,140,000	36.5
1974/75	779,000	2,079,886	138.0				138.0		2,079,886	37.5
1975/76	707,000	2,091,950	149.0				149.0		2,091,950	33.8
1976/77	725,000	2,074,443	154.0				154.0		2,074,443	34.9
1977/78	771,000	2,052,624	142.0				142.0		2,052,624	37.6
1978/79	801,000	2,039,902	155.0				155.0		2,039,902	39.3
1979/80	871,000	2,045,808	162.0				162.0		2,045,808	42.6
1980/81	909,000	2,027,096	160.0				160.0		2,027,096	44.8
1981/82	922,000	2,060,898	159.0				159.0		2,060,898	44.7
1982/83	995,000	2,128,199	160.0				160.0		2,128,199	46.8
1983/84	1,092,000	2,209,725	165.0				165.0		2,209,725	49.4
1984/85	1,294,000	2,280,273	162.0				162.0		2,280,273	56.7
1985/86	1,484,000	2,321,012	161.0				161.0		2,321,012	63.9
1986/87	753,000	2,281,849	143.0				143.0		2,281,849	33.0
1987/88	1,175,000	2,236,290	156.0				156.0		2,236,290	52.5
1988/89	1,341,000	2,269,073	149.0				149.0		2,269,073	59.1
1989/90	1,604,141	2,313,822	152.0				152.0		2,313,822	69.3
1990/91	1,566,000	2,402,145	152.0				152.0		2,402,145	65.2
1991/92	1,611,000	2,438,641	162.0				162.0		2,438,641	66.1
1992/93	2,039,000	2,603,049	157.0				157.0		2,603,049	78.3
1993/94	2,377,000	2,736,452	171.0				171.0		2,736,452	86.9
1994/95	2,474,000	2,830,977	154.0				154.0		2,830,977	87.4
1995/96	2,592,000	2,935,759	164.0				164.0		2,935,759	88.3
1996/97	2,746,000	3,064,523	173.0				173.0		3,064,523	89.6
1997/98	2,826,000	3,222,591	158.0				158.0		3,222,591	87.7
1998/99	2,819,000	3,289,319	147.0				147.0		3,289,319	85.7
1999/00	2,806,201	3,269,362	169.0				169.0		3,269,362	85.8
2000/01	2,941,568	3,485,883	173.0				173.0		3,485,883	84.4
2001/02	2,973,598	3,692,703	176.0				176.0		3,692,703	80.5
2002/03	2,854,579	3,740,637	175.0				175.0		3,740,637	76.3
2003/04	2,841,720	3,851,302	184.0				184.0		3,851,302	73.8
2004/05	2,810,528	3,867,659	181.0				181.0		3,867,659	72.7
2005/06	2,846,190	3,832,145	186.0				186.0		3,832,145	74.3
2006/07	2,790,533	3,916,812	191.0				191.0		3,916,812	71.2
2007/08	2,871,107	4,012,867	186.7				186.7		4,012,867	71.5

NZDB, 1961-75, 1975, p. 39

NZDB, 1961-75, 1961, p. 72-73

Dairy Stats

Photo: Alexander Turnbull Library, Wellington, N.Z.

There are many aspects to running a successful company, most future focused. But we cannot go forward into the future without paying tribute to the past.

Livestock Improvement is a legacy organisation with a heritage of innovation based on one fundamental core - partnership with farmers.

For 100 years, in various shapes, this organisation has worked with farmers to deliver the solutions they need to remain profitable, to remain in business. And that driver is as strong today as it was back then, in 1909.

Today's farmers are, by the tools at their disposal, very different to their forbears. But at their heart lies a common goal – to work the land and the animals safely and sustainably, to deliver a living for themselves, their families and their communities.

This company stands today as testament to generations of people – farmers, herd testers, staff – who have individually and collectively applied a rare skill, passion and commitment to dairying to deliver the industry that New Zealand enjoys today.

Livestock Improvement is proud to have been a part of dairying's past, and reaffirm our commitment to being part of its future.

Mark Dewdney
LIC CEO

Credits

This special centenary edition of 'Inside LIC' is an LIC production – conceived, researched and written - by LIC's Communications and Marketing teams in collaboration with a number of people, too numerous to mention. A number provided an extraordinary level of support, knowledge and expertise and deserve formal recognition:

Stuart Bay, Glenn Whittaker, Selwyn Tisch, David Olson and Ian Hook

Designer
Rebecca de Haas Bettle

Private Bag 3016, Cnr Ruakura and Morrinsville Roads, Newstead, Hamilton 3240, New Zealand
Telephone: 07 856 0700 | Fax: 07 858 2741 | www.lic.co.nz